MEDICO-BOTANICAL EXPLORATION OF PHULBANI AND KORAPUT DISTRICTS OF ORISSA

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PREFACE

Plant drugs constitute the major part of Ayurvedic Materia Medica. It is therefore of paramount importance to explore the medicinal flora of the country in order to facilitate procurement of authentic and genuine drugs for research as well as for pharmaceutical industries.

The Central Council for Research in Ayurveda & Siddha has been actively engaged in research related to various fields of Ayurveda & Siddha. One of the programmes is concerned with exploration of medicinal flora and estimation of medico- botanical potentials of various geographical regions of the country. Several pockets rich in flora have been explored and informations collected in respect of a few have been published by the Council in the form of monographs.

Keeping in view the vast medicinal potential of Orissa, the Council through its Survey of Medicinal Plants Unit located at Central Reserch Institue(Ay.) Bhubaneshwar has carried out medico-botanical exploration of several districts largely covered with forests and has already published one monograph, "Medico- botanical Exploration of Puri District (Orissa)".

The present publication "Medico-Botanical Exploration of Phulbani & Koraput districts of Orissa", is based on the field studies carried out by the special Survey team led by Dr.Koppula Hemadri, Survey Officer, Regional Research Centre (Ay.), Vijayawada during 40 days tour to the area in May-June, 1980, followed by 5 tours, each of about 10-12 days duration, undertaken by the teams of Survey of Medicinal Plants Unit,C.R.I.(Ay.) Bhubaneshwar, led by Shri D. Narayanappa or Dr. P.C. Sharma, then Survey Officers in different seasons during 1981-85. The first chapter,i.e., Introduction - besides presenting a general account of topography, geology, climate, vegetation & medicinal flora etc. also gives first hand information on socioreligious customs of various tribes inhabiting the area. Second chapter deals with the flora, wherein 726 species belonging to 489 genera and 140 families of Angiosperms, Gymnosperms & Pteridophytes, collected from and observed in the area, are enumerated along with Sanskrit & vernacular names of the plants, short field notes, abundance, distribution and field numbers.

In addition, more than 375 folklore claims related to 209 medicinal plants were gathered from the tribal people of the area, which are described in Chapter-3. The last chapter deals with the prospects of trade with particular reference to medicinal plants, appending a list of important medicinal taxa of the area.

It is hoped that this comprehensive work will be useful for reference to the Scientists, Ayurvedic Physicians, drug dealers and pharmaceutical concerns. Constructive suggestions and healthy criticism would be welcome.

New Delhi,
Dated: 29-10-96.

(H.R.GOYAL)
Director & Chief Editor
C.C.R.A.S.

ACKNOWLEDGEMENTS

The present publication entitled "Medico-Botanical Exploration of Phulbani & Koraput Districts of Orissa " is the outcome of a 40- day special survey followed by five 10-12 days exploration trips in different seasons conducted by C. C.R.A.S., under its one of the research programmes in the field of Medico-Botanical Survey.

The Council is indebted to the Ministry of Health & Family Welfare, Govt. of India for providing financial and administrative support. The Council is grateful to the Hon'ble Union Minister and Minister of State for Health & Family Welfare, who are the President and vice President respectively of the Governing Body of the Council, to the members of the Governing Body, Finance Committee and Scientific Advisory Committee and Senior Officers of the MInistry of Helath & Family Welfare for their valuable guidance and encouragement.

The Council is also thankful to the Director and the Officers of Botanical Survey of India for providing permission and according necessary facilities and co- operation needed for consultation of the B.S.I. herbaria and libraries located at Calcutta, Coimbatore and Pune. The co-operation and help extended by the Forest officials of Phulbani & Koraput districts during the exploration of the area is thankfully acknowledged. The Council is also thankful to Shri A.L.Rao, Ex-Principal Chief Conservator of Forests, Hyderabad for his useful suggestions and keen interest in the work.

The Council extends its thanks to Dr.Koppula Hemadri & Dr.P.C. Sharma whose dedicated efforts have made it possible to compile the observations in form of this monograph. It is also thankful to Dr.V.N. Pandey Ex-Director, Dr.Prem Kishore, Assistant Director (Ay.), H.Q. for their keen interest and initiatives taken to materialise compilation and publication of the work and Dr.P.P.N. Bhattathiri, Assistant Director, R.R.C., Vijayawada for encouragement. Thanks are also due to the Survey teams comprising of Dr. Koppula Hemadri, Dr.P.C.Sharma, Shri D. Narayanappa, Shri S.S.B.Rao, Shri K.S. Murthy, Shri G.Nagappa, Driver, Shri B.D. Moharana, Driver, Shri G. Dash, Driver, Shri R.C. Tiria, field Attendant, Shri C. Naik, Mali, Shri Ch.M.Rao, Field Attendant and Shri Ch.N.Rao, Attendant for completion of the Survey work. A word of appreciation is due to Mrs. N.P. Dhekane, JNAMPG & H, Pune for typing *MSS* and staff members of R.R.C. (Ay.), Vijayawada for their co-operation.

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New Delhi,

Dated: 29-10-96.

(H.R.Goyal)

Director & Chief Editor

C.C.R.A.S.

सारांश

औषध वानस्पतिक सर्वेक्षण केन्द्रीय आयुर्वेद एवं सिद्द अनुसंधान परिषद के महत्वपूर्ण कार्यों में से एक है। वर्तमान प्रकाशन उडीसा के फूलबानि एवं कोरापुट जनपदों में परिषद द्वारा किए गए गहन अध्ययन पर आधारित है। यह 40 दिनों के एक विशेष सर्वेक्षण तथा पांच अलग–अलग ऋतुओं में किए गए 10– 12 दिनों की अवधि के दौरों के फलस्वरूप संभव हुआ है। प्रस्तावना के अंतर्गत उस क्षेत्र की स्थलाकृति, भौमिकी, जलवायु एवं वनस्पति आदि के सांक्षिप्त विवरण के अतिरिक्त उस क्षेत्रमें रहने वाले विभिन्न आदिवासियों के सामाजिक एवं धार्मिक रीति रिवाजों का विस्तृत विवरण प्रस्तुत किया गया है, जो कि सर्वेक्षण के दौरन उनसे प्राप्त की गई जानकारी पर आधारित है। उस अद्ययन में आवृतबीजी, अनावृतबीजी एवं टेरिडोफाइटा की कुल 726 जातियों का संग्रह व अवलोकन किया गया, जिनका विवरण संस्कृत एवं प्रान्तीय नामों, संक्षिप्त क्षेत्र टिप्पणियों, प्रचुरता तथा वितरण एवं क्षेत्रांकों आदि के साथ बेंथम एवं हुकर के वर्गीकरण के अनुसार प्रस्तुत किया गया है। औषध – पादपों के उपयोगों का विवरण बहुत सी पुस्तकों में उपलब्ध है, अतः अनावश्यक पुनरावृत से बचने के लिए उनका उल्लेख नहीं किया गया है।

कार्य के दौरान स्थानीय आदिवासियों से उनके द्वारा प्रमुक औषध – पादपों की जानकारी प्राप्त करने का भी प्रयास किया गया और लगभग 375 लोक प्रचलित दावों का संग्रह किया गया, जोकि 200 से अधिक पादप जातियों से संबद्ध हैं। उनका विस्तृत विवरण प्रस्तुत किय गया है।

अंत में विशेष रूप से महत्वपूर्ण औषध पादपों के संदर्भ में व्यापार की संभावनाओं का विश्लेषण किया गया है और ऐसे पादपों की एक सूची भी प्रस्तुत की गई है, जिनका उस क्षेत्र में समुपयोजन किया जा सकता है।

SUMMARY

Medico-Botanical Survey is one of the most important programmes being carried out by the Central Council for Research in Ayuveda & Siddha. The present publication is based on the exhaustive exploration of Phulbani & Koraput districts of Orissa carried out during a 40-day long special tour, followed by 5 small duration tours varying from 10 to 12 days in different seasons. The introduction, besides dealing with topography, geology, climate and vegetation etc.,also presents first hand information gathered during this work on socio-religious customs of different tribes inhabiting the area. During the exploration 726 species belonging to Angiosperms, Gymnosperms and Pteridophytes were collected & observed. These are enumerated alongwith their Sanskrit & vernacular names, brief field notes, abundance & distribution in the area and field numbers etc., mainly following Bentham & Hooker's classification. The details regarding medicinal uses, as described in classical texts, are easily available in several books, hence these have not been given here to avoid duplication.

During the field work efforts were also made to gather information regarding the plants being used for medicine by the local tribes and about 375 folk-lore claims related to more than 200 plant species were gathered. These are presented alongwith necessary datails.

At the end the prospects of trade with particular reference to important medicinal plants of the area are discussed and the plants worth exploiting are enlisted.

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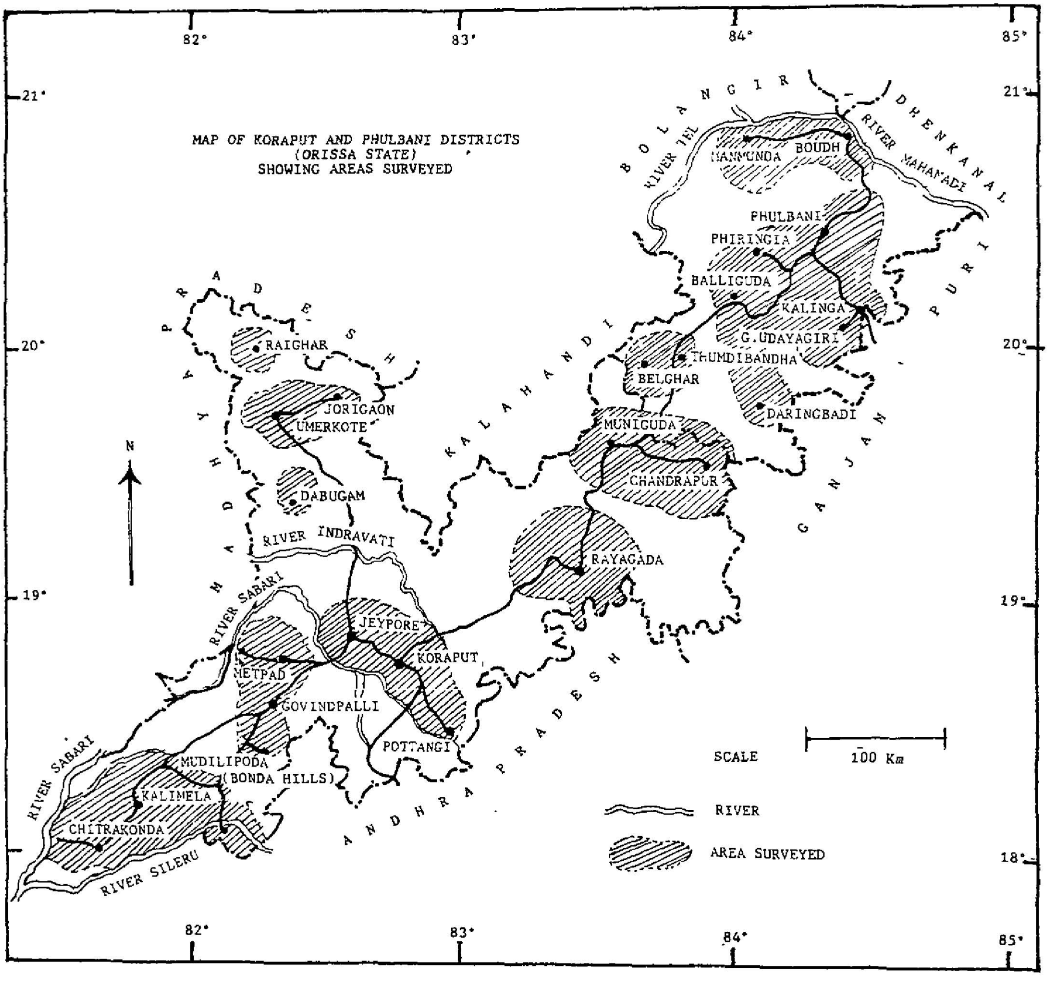
1st Cover : The Bondas : An Austro-Asiatic Tribe -- Bonda Hills

4th Cover : Butea monosperma in full bloom

[Photography by: Hemadri *et* Swahari]


MAP OF KORAPUT AND PHULBANI DISTRICTS
(ORISSA STATE)
SHOWING AREAS SURVEYED
82°
83°
84°
85°
21°
20°
19°
18°
N
BOLANGIR
DHENKANAL
RIVER TEL
RIVER MAHANADI
BOUDH
PHULBANI
PHIRINGIA
BALLIGUDA
KALINGA
G.UDAYAGIRI
THUMDIBANDHA
BELGHAR
DARINGBADI
PURI
GANJAM
KALAHANDI
MUNIGUDA
CHANDRAPUR
RAYAGADA
MADHYA PRADESH
RAIGHAR
JORIGAON
UMERKOTE
DABUGAM
RIVER INDRAVATI
RIVER SABARI
JEYPORE
KORAPUT
METPAD
GOVINDPALLI
POTTANGI
MUDILIPODA
(BONDA HILLS)
KALIMELA
CHITRAKONDA
RIVER SILERU
ANDHRA PRADESH
SCALE
100 Km
RIVER
AREA SURVEYED

×

CHAPTER - I
INTRODUCTION

The State of Orissa is quite rich in natural resources. More than 40% of its total area is covered with forests, which offer good opportunity for medico-botanical explorations. The interiors of the forests, as well as their outskirts, are inhabited by tribal population, still largely dependent on plants for their shelter, food as well as medicine. It provides good scope for ethno-medico-botanical studies. The area selected for the present studies, i.e., Phulbani and Koraput districts, is largely covered with dense forests having rich flora. This area has not received much attention of the Taxonomists and Ethnobotanists in the past. One team from Survey of Medicinal Plants Unit, R.R.C. (Ay.) Vijayawada undertook a special survey tour of 40 days duration in the months of May & June, 1980 covering several important localities of both the districts. It was followed by five more tours, each varying from 9 to 12 days, in different months and seasons during the years 1982-1985, conducted by the teams of S.M.P. Unit of Central Research Institute (Ay.), Bhubaneshwar. The details of the Medico-Ethno-Botanical studies carried out during these explorations are presented herewith.

TOPOGRAPHY :

The area under study includes entire Koraput and Phulbani (Boudh-Khondmals) districts of Orissa State. It lies between 17^{0}-15' and 20^{0}-55' (N) latitude, and 81^{0}-25' and 84^{0}- 48 (E) longitude. Koraput and Phulbani districts respectively form the Southern most and the Central parts of Orissa State.

Koraput District is bounded in the East by Andhra Pradesh and Ganjam district of Orissa, in the North by Phulbani and Kalahandi districts, in the West by Madhya Pradesh and in the South by Andhra Pradesh. Like-wise, Phulbani district is surrounded by Bolangir and Denkanal districts in the North, Puri and Ganjam districts in the East, Koraput district in the South and Kalahandi and Bolangir districts in the West.

The hill ranges of Koraput and Phulbani districts constitute a part of Eastern ghats which, in turn, form part and parcel of the popularly known `Dandakaranya', the epic exile of Sri Rama.

Koraput, the District Head-Quarters is situated on a plateau of 900 m. Down below to its West, at an altitude of 600m lies the famous town of Jaypore, the erstwhile capital of the Maharaja Shri Vikramdeo. For the convenience of administration, the District of Koraput is divided into three forest divisions namely, Jeypore, Rayagada and Nowrangapur.

The Gupteshwar Caves with Stalactite & Stalagmite formations near Metpad need the Department of Tourism's attention.

Phulbani is the District Head Quarters of the Boudh-Khondmals, otherwise, known as Phulbani district. This district is also divided further into three Forest Divisions, namely, Phulbani, Balliguda and Boudh. While the Boudh Forest Division is mostly occupied by plains with open area, the remaining two viz., Phulbani and Balliguda divisions are mountainous and generally thickly forested in nature.

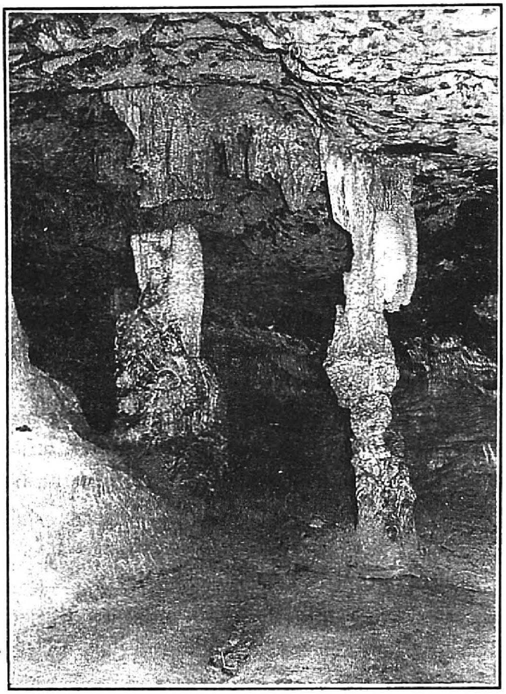


Fig. No. 1

Gupteshwar Caves :
Stalactite and Stalagmite formations
-- Metpad

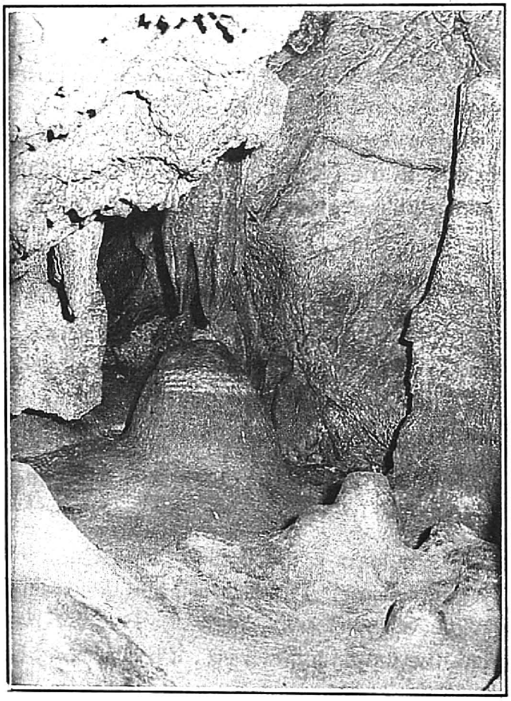


Fig. No. 2

Gupteshwar : A `Shivling' of Stalagmite formation is worshipped by the tribals of Metpad area

GEOLOGY :

1) Rock : The main rock types of the region under study are as follows :

a. *Recent - Sub-Recent :* Alluvium and laterite.

b. *Gondwana formation :* Shales and sand stones.

c. *Intrusives :* Quartz and Pagmatite veins, Leptymites and Garnstiferous graphite gneiss.

d. *Cuddapah series :* Purple shelve with intercalations of lime stone with white quartzites.

e. *Archaean :* Khondalites, calcigranulites and quartzites.

f. *Eastern ghats groups :* Charnokites.

2) Soil :

a. *Red laterite soil :* Prominent in the Forest tracts.

b. *Black soil :* Found in the plains.

c. *Coarse alluvial soil :* Found in the Kolab, Machkund and other valleys.

3) Minerals :

Iron, Manganese and Graphite ores and Coal are major minerals available in the area under study.

Kaolin is found around Jaypore and Boipariguda. Placer gold is found in Govindapalli, Kallaru, Sarangapalli and Dharmagad reserves. Extensive flux grade lime stone deposits are found near Nandivada and Kotametta areas. Deposits of yellow ochre and red ochre are found around Boipariguda and Phulbani respectively. Coal is noticed in Katrangia (Belpodar-Gatchapoda Coal-belt). Fairly good deposits of Iron are recorded about Malkangiri. Graphite is seen along the border of Bolangir-Phulbani districts. Tin is found along the river Kolab (Sabari).

RIVERS :

In Phulbani, Mahanadi and Tel are the two major rivers which mark the Northern and Western boundaries of the District respectively. Salki and Bhagnadi are the two tributaries of Mahanadi, which originate in this district.

In Koraput district Sileru and Sabari (Kolab) are the two perennial rivers. They originate in the District and form its Western and Eastern boundaries. The Nagavali and the Vamsadhara are small rivers originating from the Northern part of the District.

CLIMATE :

The general climate of Jaypore and Koraput plateau is of Deccan type, but the summers are cooler, rainfall is higher and winter is prolonged. Malkangiri low plains are hotter, drier and uncomfortable. There are three main seasons, the Hot season from March to May, the Rainy season from mid-June to September and the Cold season from October to February. The average rainfall of Koraput District is 1522 mm. In monsoon months it may rain for days together in the Koraput and Jaypore plateau. Sun may not appear for days at a time. Cyclonic rains also occur in November-January.

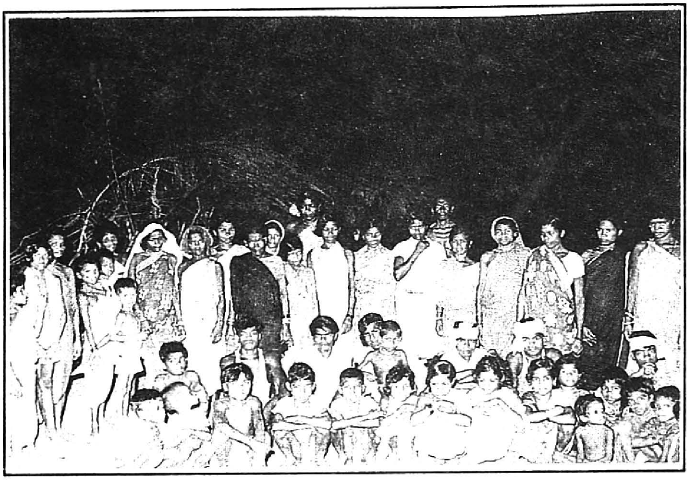


Fig. No. 3
Koya Women & Children : Settled in a colony
at Kalimela with Government prop

Fig. No. 4
Koyas in dancing mood :
-- Kalimela

In Boudh-Khondmals severe cold is experienced during December-January, particularly in Phirangia and Gatchapoda area. Where as, Manmunda area is recorded to be the hottest place in the District, the maximum temperature often reaching 46.1^{0} C- 47.75^{0} C

HEALTH :

Malaria is prevalent throughout the forested area and some times its more complicated forms like Black water fever and Cerebral Malaria also occur. Diarrhoea, Dysentery and Venerial diseases are very common among the backward population.

THE TRIBALS :

Scheduled Castes, Scheduled Tribes and other Backward Castes form the bulk of the population. The people from plains live mostly in towns and flourishing villages. The tribal population is distributed throughout the tract in small villages consisting of 5-6 families. The principal tribes are Bondas, Gondas, Khondas, Koyas, Porojas and Bhatodas.

Bonda :

The Bondas are a small Austro-Asiatic Tribe. They have isolated themselves in the wild mountainous country in the upper Machkund catchment. They number nearly 2565 according to 1941 census. In recent years their number has increased to about 4000. Their violent homicidal methods are well known. They are fierce and proud tribe and make their rare appearance in the weekly market of Khairput. Even now they shun civilization. Both males and females dress in loin cloth and shave their heads. Women cover their upper part by strings of beads of several attractive colours. They wear several metallic rings around their necks. Males are lazy and females generally shoulder the burden of house work and cultivation.

The occupation of Bondas is mainly shifting cultivation and collection of minor forest produce. Mandia (Ragi), Rice, several wild fruits and roots are their main food. They take a variety of non-vegetarian foods including beaf. Toddy, Salap (toddy from *Caryota urens*) and Mohwa are their intoxicating drinks.

Their principal deity is `Patkonda Mahaprabhu'. Widow marriage and divorce is prevalent. The wife would be many years older than the husband. Male gets married before the appearance of his moustache.

Bondas burn their dead. But in cases of deaths of pregnant women and victims of Cholera and other deadly diseases they bury the dead bodies.

Gadba :

The Gadbas are a primitive tribe classified as `Mundari' or `Koliran' on linguistic grounds. The word `Gadaba' means a person who carried land on his shoulders. Gadbas inhibit the hill tracts on Andhra Pradesh border. Their beliefs are akin to Hindus. They burn their males and bury their women and children on death. Stone slabs are erected in memory of the dead. They believe the existance of devils and beat or abuse any person possessed of a devil until the devil leaves him/her. Their main occupation is agriculture. The hair style and the striped robes of the gadba women are very distinctive.

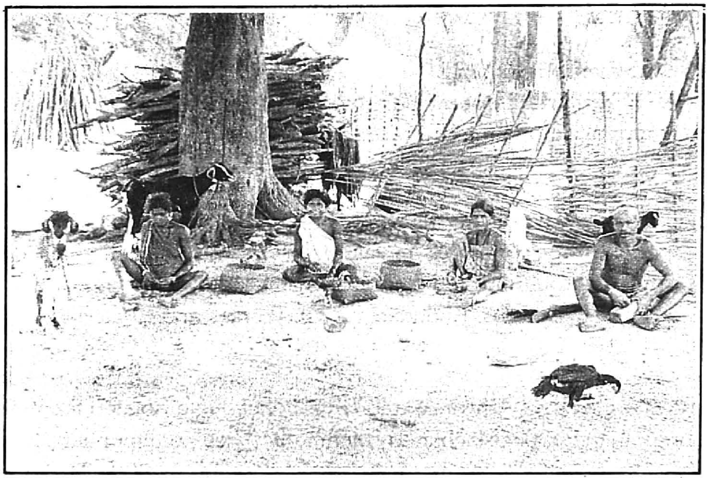


Fig. No. 5

Koya family at work
-- Koimetla

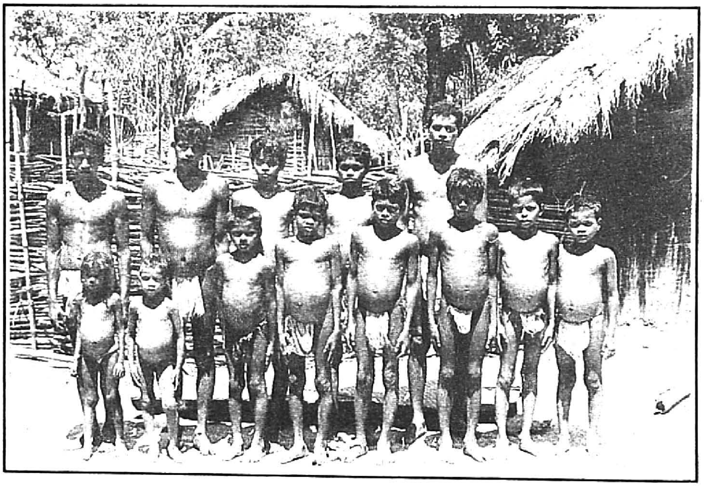


Fig. No. 6

Koya Youth & kids in Koimetla hamlet :
Malnutrition ?

Gonda :

Gondas are a tribe of Dravidian Origin thinly distributed in Koraput District. They speak a Dravidian tongue called Gondi. Their religion is Hinduism with strong tendency towards totemism. They often use sacred threads and are treated as high caste. Witch craft is widely believed and practiced. Their occupation is mainly agriculture and they are heavy drinkers.

Khond ;

Khonds are variously distributed in both the plains and hills but are mainly found on the Andhra Pradesh border. There are 58 sub-divisions of Khonds who speak the `Kuvi' dialect. They are physically sturdy and their main occupation is agriculture. They believe in 84 Gods of whom the `Dhorni Devata' is the chief. Various sacrifices including a buffalo are offered to the Earth Goddess in lieu of human sacrifice which was formerly in vogue. The dead ones are burnt.

Khonds practice shifting cultivation and often raise turmeric. They are expert hunters. They prefer to marry maternal uncle's daughter. A mock ceremony of capturing the bride is observed.

Koya :

Koyas inhabit remote forest areas of Malkangiri sub-division. They are said to belong to the great Gond family. They speak the `Koya' language which is a dialect of Telugu. They believe in Hindu Gods as well as their tribal Goddesses like Pandavas and Mutyalamma.

On the 7th day after child birth, the child would be given a name and a Mahua leaf is kept in child's hand. If the child closes the hand then it is considered that the name is accepted. Otherwise, if the child rejects the leaf, another name is suggested and the process is repeated. When a Koya dies, a cow or bullock is slaughtered, the tail is cut off and kept in the dead man's hand, and a piece of liver in his mouth. The body of adult is burnt but that of a child is buried.

The main occupation of Koyas is cultivation. They eat rice, unlike other tribes whose diet is `Mandia'. They are physically sturdy with better than average height and a copper coloured complexion. Their attire and the head dressed with plumage and horns lends a special charm and distinction to their dancing.

Poroja :

The Porojas constitute the largest tribe in the Jaypore tract. They are divided into 12 groups and the dialects differ from one another, so also their customs and traditions. They are widely distributed both in plains and hills excepting the southern most region. Their language is `Porgi'. They worship Bhumidevta and offer various sacrifices, once in three years. The village priest performs the sacrifice and the festival ends with feast and drink. They also believe in Hindu Gods and Goddesses. The Porojas of plains undertake permanent cultivation and the hill Porojas shifting cultivation. Most of them are also employed as forest and industrial labourers.

Bhatoda :

Bhatodas are a class of Oriya cultivators and labourers of the great Gond tribe, speaking Muria or Lucia or otherwise known as `Basturia', a dialect of Oriya. This is the second largest tribe generally inhabiting the plains of Jeypore, Boipariguda and Kundra areas. They burn their dead and observe pollution for 10 days. They generally believe in Hindu Gods and Goddesses.

(The above information on tribals is based on Forest Working Plans of Koraput and Phulbani Districts)

SOCIO-RELIGIOUS CUSTOMS :

Generally speaking, the tribal religion and culture, to a great extent, has been assimilated into the Oriya way of life excepting for Bondas who still keep themselves aloof. Chaitraparba and Pausa-parba are the festivals observed accompanied by much dancing, hunting and drinking. Other religious festivals are numerous and consume much of the time of the population for which the out-put of labour and food products as well as the standard of living is very low. The tribal population as a whole are habitual drinkers, smokers and lazy in their habits. polygamy is common. Literacy is very low and they are easily misguided by money lenders and unscrupulous trades men. As such their living is simple so also their occupation. A common tribal is either busy in agriculture, hunting of games and collection of variety of edible items from forests or is travelling to the various weekly markets and festivals in the vicinity of his home.

Some first hand information gathered in respect of socio-religious customs of some tribes of Koraput district is given here under.

Koya (Kalimela & its surroundings) :

Koyas speak Koya language and also corrupt Telugu. A few sentences recorded are as follows:

Nee Peder baath ?	-	What is your name ?
Naa peder Dula	-	My name is Dula.
Yid baath mara ?	-	What is (the name of) this tree ?
Yith mara	-	Tamarind tree.

Koyas worship Hindu gods and celebrate various festivals such as Dusserah, Dipavali etc., in addition to `Vadla kotha Pandaga' at the time of harvesting the paddy, `Mamidi pandaga' a festival celebrated to taste a young mango fruit, `Chikkudi pandaga' to harvest first crop of beans etc.

Koyas cultivate Rice, Ragi and various vegetables and fruits. Their staple food is rice & ragi.

As soon as a child is born, the mother is given a tumbler full of Mohul (Madhuka) liquor. No other food is, however, given on that day. Hot water bath is given to both the mother and the child. From second day onwards, rice gruel with Kanji is given for 3-4 days. Thereafter normal food is allowed.

Naming and Cradle ceremony is performed on the 7th day. A leaf of `Madhuka' (V: Mohul, Ippa) or `Aswatha' (V : osthu, Raavi) is kept in the child's fist and simultaneously a name is suggested. If the child holds the leaf firmly in the fist, then it is considered that the given name is accepted by the child. If the leaf is rejected, an alternative name is suggested and the process is continued till the child `accepted' the name. Some of the names suggested are as follows:

Male child	- Nanda, Dula, Bhima, Ganga
Female child	- Devi, Dule, Bhimi, Gangi etc.

During the menstrual periods the women stay themselves away for 3-4 days. At the time of first menstruation, the girl is kept aloof for 7 days in a small hut constructed for the purpose. She is given normal food. On the 7th day, the girl is given a bath and the occasion is celebrated with a feast of non-vegetarian food including beaf, pork, mutton and intoxicants such as Landa & Mohul followed by a group dance.

Marriages are contracted between females of 13-15 years or after one year of attaining puberty and males of 25-30 years or of younger age with considerable earning capacity for livelyhood.

The entire marriage expenditure of about Rs. 500/- has to be born by the parents of the bridegroom. The marriage function is performed by `Pundita' at bridegroom's place under the shade of `Madhuka' (V : Ippa) or `Kosamra' (V : Pusi, Kosum) trees or a pandal made of their branches. These trees are also worshipped by the new couple on that occasion. Marriage celebration generally extends for about two days. During these days, the relatives and the villagers are given grand feast consisting of non-vegetarian preparations and Mohul liquor. Invariably there will be a group dancing in accompaniment of drum-beating. There after the new couple live happily together.

A koya can have upto three wives if he is well of. Widow marriages are also permitted. However, the would be spouse has to pay some amount in cash and kind as a penalty to the widow's father or to the village elders, who in turn spend the money to arrange a feast for themselves. The children, if any, of the widow, should be looked after by the new partner.

The dead bodies of the married are cremated and of unmarried are either cremated or buried. If the death is due to some dreadful disease, such bodies are said to be buried. The final obsequies are performed on the 15th day. On that day, the bereaved family members and the mourners are purified by sprinkling turmeric water. This is followed by a feast of non-vegetarian food together with intoxicants such as Landa & Mohul liquor.

Women have no share in the properties. However if the father wishes so, he can gift some property to his daughters. In the event of the father's death, all the sons share the properties equally.

The common ailments with which the Koyas suffer are fever, rheumatic pains, stomach ache etc.

Bonda (Mudulipoda on Bonda Hills) :

Bondas, a small Austro-Asiatic tribe numbering to about 4000, have isolated themselves off into the mountainous country known as Bonda hills. They speak their own Bonda language and also currupt Oriya.

Bondas worship `Patikonda Maha Prabhu'. At Mudulipoda, Maha Prabhu's festival is celebrated on `Maghapurnima' day. They also celebrate Dusserah festival.

Bondas cultivate Ragi & Paddy and also grow various vegetables including yams and arrow root. Mandia (Ragi) and Rice form their staple food. They prepare `Landa' with `Mandia' and `Pendam' with rice for consumption. They also eat fish, beaf, pork, mutton, flesh of various wild animals, rat and even snake. They consume intoxicating `Mohul maddu' (Madhuka liquor) and `Solopo' tapped from *Caryota* palm.

In Bondas, clean-shaving of the heads of both the sexes once in a week has been in vogue. But of late, only the fair sex including the kids shave their heads and wear head gears made of palmyra leaf, decorated with a knit work of `Suta' a fine & strong fibre made of inner bark of *Wrightia tomentosa.* Though they are topless, the attractive strings of beads and matallic rings they wear around their necks cover the chest. The metallic bangles also almost cover their lower arms. But for the small piece of thick loin cloth just sufficient for covering the lower obscene parts, they are practically nude to look at. In addition to the above the married women also wear metallic anklets.

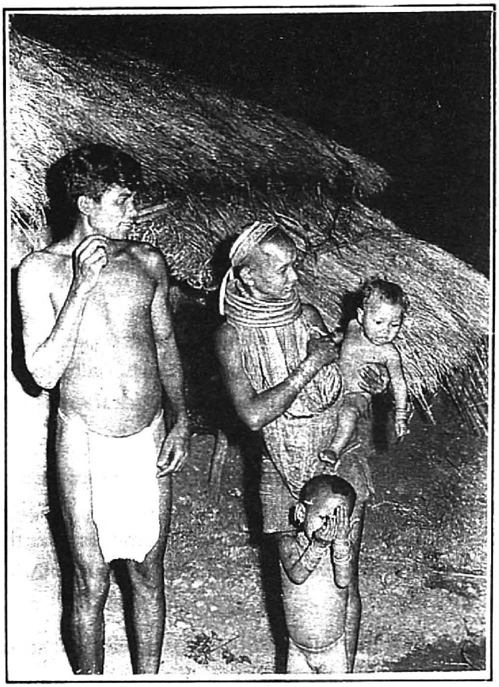


Fig. No. 7

A Bonda Family :
Husband is younger than wife
-- A Custom

Fig. No. 8

Bonda Fair Sex :
Lavish Pendants, Less Clothing

According to the legend, Sita, the wife of Sri Rama in the exile in Dandakaranya (Bonda hills being a part of it) was bathing in a water hole (now named after Sita as `Sitakund'). Some Bondas happened to see her bathing without any covering round her body, made fun of it by laughing at her. Sita got annoyed at this insult and cursed the Bondas to live nude and clean shave their heads too as a punishment. `That is why', the Nayak of Mudulipoda village explained, that `the Bondas do not wear clothes and live only in isolation on the hill tops'. `The only occasion we wear the clothes is on the day of Maghapurnima festival to worship Patikonda Maha Prabhu', he however asserted.

It is interesting to note here that the Nayak pronounced Shri Rama's wife as `Sitha' (सीथा) but not as `Sita' (सीता) as we all normally pronounce.

The Bonda men folk are generally lazy where as, the women are hard working; they even attend to the seasonal agricultural work.

The girls are kept aloof for 7 to 8 days during the first menstruation. They are then allowed, after a bath, to enter the house and mingle with others. During the subsequent `periods' they are allowed inside the same day after having a bath.

Bondas, like Gonds of Bastar, maintain a sort of `recreation night clubs' for the unmarried. But unlike `Ghotul' of Gonds where both the male and the female unmarried youth of the village are allowed to stay over night in one and the same hut together, the Bondas of every settlement have separate huts one for the boys and the other for the girls, known as `Dhangda' and `Dhangdi' respectively. It is interesting however, to note that whenever the unmarried girls of one settlement visit the neighbouring settlement, they have to spend their nights in `Dhangda' only but not in the `Dhangdi' meant for girls. Similarly, those unmarried boys who visit other settlements have to spend their nights in `Dhangdi' but not in `Dhangda' meant for boys. During this sort of `dating' if a boy likes a girl, he puts an anklet around her leg expressing his willingness to marry that particular girl.

Marriages are however settled between males (Vandra pila) of only 8 to 10 and females (Maigna pila) of 16-18 or of more age, generally belonging to two different settlements.

The prospective bride is invited by the In-Laws during the Dusserah festival for about 10-12 days and entertain her with intoxicating drinks such as Landa. From the next Dusserah onwards, now married, she starts her new life at her In-Laws' place. A sum of Rs. 5.00 and a pair of bullocks are presented at the time of marriage to the bride's father by the bridegroom's parents. But for this, there is no dowry system in Bondas.

The married women can pay visits to their parents whenever they feel-like.

A Bonda male can have upto three wives. Widow marriages are allowed. The widow can marry even younger or elder brother of her deceased husband.

If an unmarried Bonda woman is found to be pregnant, the elders of the village find out the person responsible for it and fine him suitably.

On the day of delivery, the mother and the child are given a hot water bath. prior to the bath, turmeric paste is smeared all over her body. No medicine of any sort is administered to the mother. She is given some gruel made of `Sama' (*Panicum sumatrense* Roth ex Roem. et Schult.)

Fig. No. 9
The Spouses of a Kutia Rana
-- Dudhbeda near Metpad

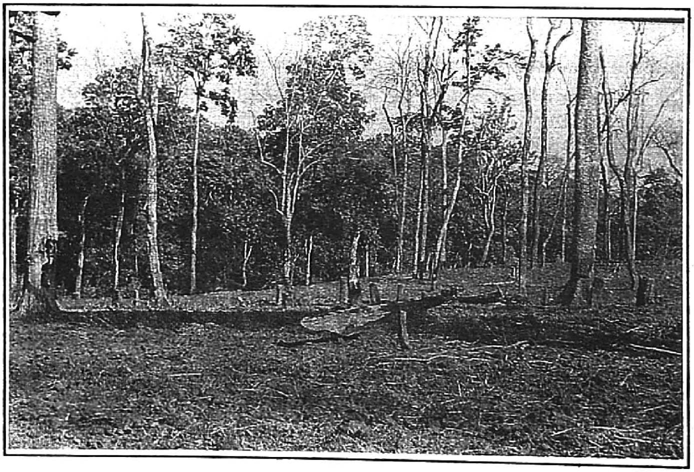


Fig. No. 10
Clearing of Sal forest for `Podu' cultivation
-- Metpad

millets. From third day onwards no food restrictions are observed.

Naming ceremony is performed on the 8th day and `Annaprasana' on completing an age of one year.

To wardoff ailments, the Bonda gunya (witch doctor) performs prayers, offers coconuts and chicken to the diety on behalf of the sick. The number of coconuts and the chicken to be offered depends, generally, upon the severety of the disease the patient is suffering from.

The dead bodies of both the sexes, whether married or not are cremated. The final obsequies are performed on the 9th day. The Bondas offer some cooked rice to the deceased soul at the cremated place. A feast is also arranged for the mourners.

Properties are shared among the sons of the dead only. However, the elder one gets a lion's share.

Kutia Rana (Metpad area) :

Kutia Ranas practice Podu (shifting) or Jhola cultivation by ruthlessly cutting down the trees in the surrounding forests. They cultivate Mandia, Paddy, Bajra, Kandul (red gram), Mokka (Maize), Olsi (Linseed), Kultha (Horse gram), Til etc. They worship Ishwar, Dharni Mata and Mahaprabhu. They also celebrate `Chowthi parbha' to worship Dharanimata.

On the day of delivery, the mother is made to bathe in cold water after smearing turmeric paste in `Olsi' oil (*Linum* seed oil) all over the body. A few drops of til oil are put in the ears also. The child is bathed in warm water.

On that day, the mother is allowed to take Mandia page (Ragi gruel). No medicine of any sort is given to her and the child. From the 2nd day onwards the mother is given normal food including fish, chicken, mutton and intoxicating drinks such as Pendam, Landa and Modda (Liquor made of Madhuka flower).

Naming ceremony is performed on the 7th or 9th day. The `Guniya' of the settlement performs prayers to Mahaprabhu and a name is selected depending upon the `Janmarasi'.

At the time of first menstrual period, the girl is kept aloof for 7 or 9 days. At the end,the Guniya performs pooja by offering chicken and coconuts. Thereafter, during the regular `periods' the girl is not allowed to mingle with others for 3-7 days.

Marriages are contracted between girls of 16-20 and boys of 9-12 years of age or more. In general, the bridegrooms are younger than the brides. The father of the prospective bride groom visits the would be father-in-law, offers his presentations such as liquor, chicken etc., in addition to an amount of Rs. 200/- or 300/- in cash and settles the marriage deal.

The Guniya from the bride's side goes to the bridegroom's village and fixes the `Muhurth' for wedding ceremony. Marriage is performed at the bridegroom's place and the entire expenditure towards the feast etc., is borne by his parents.

A Kutia Rana can have upto 18 (eighteen) wives. If the wife wishes to desert her husband to marry some one of her liking, she can do so, provided the would be husband pays back the amount spent by her ex-spouse at the time of her earlier marriage. In such cases the children, if any, are retained by their father. Infants are, however, allowed to take along with the mother only to return them when they attain certain age. Widow marriages are not a taboo. The married males wear a sacred thread.

Fig. No. 11

Bazaar : Business transaction on a shandy day
-- Phulbani

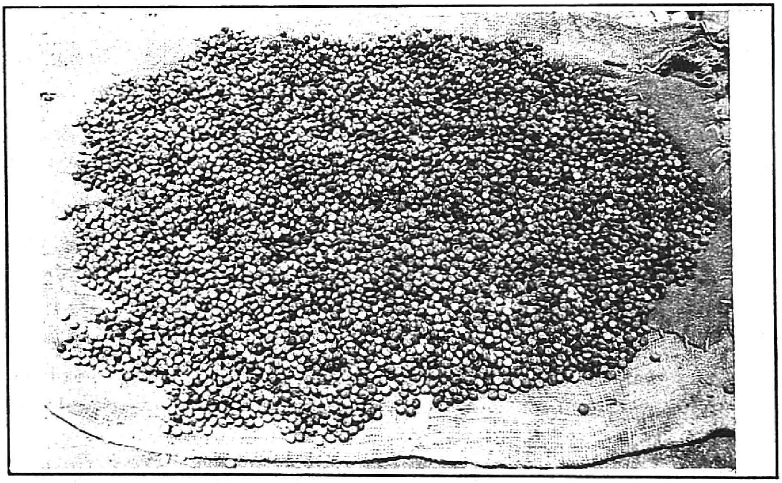


Fig. No. 12

Minor Forest Produce :
Seeds of *Schleichera oleosa* are collected
and sold by the tribals in weekly shandies

The dead are cremated. However the bodies of children, pregnant women and those died of certain dreadful diseases are buried. During the first three days the family members offer the soul of the dead, a preparation known as `bitter rice' i.e., cooked rice mixed with paste of mango stem-bark, turmeric, any edible oil and fish. Then they bathe in a near-by stream. On the tenth day, the brother or the father of the deceased with a clean-shaved head performs the final obsequies. During these ten days the mourners eat non-vegetarian food, drink and weep for the dead.

The properties are shared among all the sons of the deceased. However, the eldest son would get a Lion's share.

When enquired into the wisdom of marrying upto eighteen wives, one Kutia Rana (Village head of Dudhbeda near Metpad, Koraput district) replied thus. We practice `Podu' cultivation for which many `helping hands' are needed. Who else would help faithfully other than `One's own wife? Hence, we marry many and get maximum help from them in clearing the jungles by cutting down the trees and shrubs for `Podu' cultivation.

Jatapu Dora or Kondo (Ladda near Rayagada) :

Jatapu doras, also known as `Kondo' worship Rama, Ishwara, Jaankari devta and celebrate Bhumipandaga, Deepavali, Samkranti etc

They cultivate Ragi, horsegram and grow brinjal, tomato, beans, etc. Their staple food is Ragi gruel and rice. They also eat fish, chicken, mutton, pork, flesh of wild bear and other animals of the forest.

They neither prepare pendam nor tap toddy However, they prepare country liquor made of `Madhuka' flower and drink on festive occasions.

On the day of delivery, the mother and the child are given hot water bath. During the first 7 days the mother is allowed to eat only rice mixed with some salt. Then onwards she is given normal food with `Rasam' prepared with horsegram.

The naming ceremony is celebrated on `Bhumipandaga' day. The name is selected as per the wishes of the parents. They also bear sir-names. To mention a few :

Male - Vuyikolu krishna, Poola Daamana, Poola Latchana

Female - Kaali, Hyma, Saayamma etc.

On the first menstruation, the girl is kept aloof for a week and then given a bath before allowing her inside the house to mingle with others. The occasion is celebrated with a feast of non-vegetarian food followed by consumption of Mahua liquor

A boy and a girl of marriageable age meet secretly and come to a decision to marry each other. One fine morning the boy catches hold of the girl's hand, brings her infront of her parents, pay them `Oli' (Kanya Sulkam) ranging from Rs. 200 - 500 and also a pot of Mohwa liquor together with one or two chicken. The payment of `Oli' and presents is arranged through is father.

The marriage is celebrated at bridegroom's place and invariably during the night time. 'Deesari' (Purohit) of the settlement performs the marriage and it is celebrated for two days. As usual, there will be a grand feast to eat and mohwa liquor to drink.

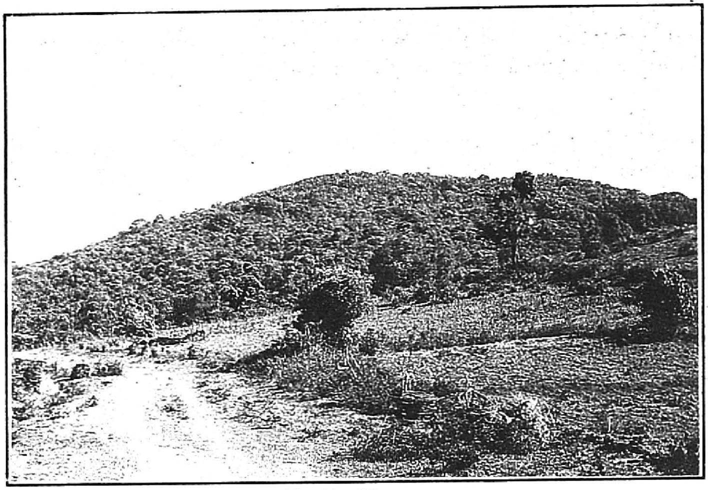


Fig. No. 13

Conservation Par Excellence ! :
`Devkonda' is believed to belong to the God (Sacred groove).
Hence the rich growth of vegetation
-- Bonda Hills, Mudilipoda

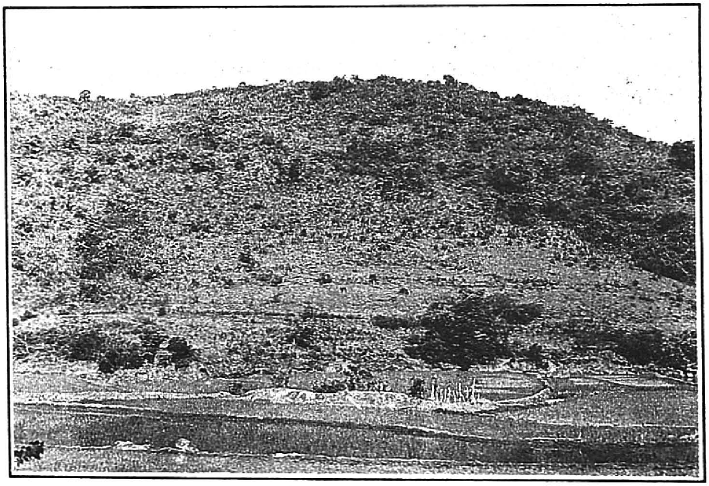


Fig. No. 14

Unprotected Hill-Vegetation:
-- Mudilipoda

Jatapu dora can marry upto 3 wives; widow marriages are also allowed

The dead are buried. Those died of some diseases are cremated. On the second day the bereaved family members and the mourners visit the burial ground and offer a chicken through 'Vijjuraalu' i.e., a woman on whom the soul of the deceased possesses. On the 10th day, final obsequies are performed by sprinkling 'holy water' with a mango leaf on the family members to cleanse the pollution due to death

For cure of various ailments Jatapu doras go to 'Vijjodu' (witch doctor) who performs prayers by offering one or two chicks depending upon the severety of the disease A sacred thread is also tied around the upper arm of the patient As soon as the illness is cured, the patient once again presents one or two chicks to the Vijjodu to express his gratitude for restoring his health.

BAZAAR :

Most of the consumer goods are purchased by the tribals in the local weekly markets either by barter of agricultural produce and 'Minor Forest Produce' or by payment of cash. Items like clothes, utencils, food grains, vegetables, dried fish, cattle and sheep are sold and exchanged in these markets. Tamarind, Gum, Resin, Mohwa flowers, Sargi seeds etc , are the forest produce collected for exchange. Many of them also work as labourers on Road and Forestry works. Each area is almost self sufficient and represented by all varieties of occupational trades. Most of the tribals are simple, honest and fun-loving. But they keep to their own society and do not easily take outsiders into their confidence Life as a whole for them is a hard struggle with disease and other calamities taking a heavy toll

AGRICULTURE:

The tribals in the plains cultivate permanent wet land while those of the hills shifting cultivation. Rice, Jowar, Mandia, Mug, Arhar, Sugarcane, Potatoes and other vegetables are raised. In 'Podu' cultivation Maize, Mandia, Linseed, Mustard, Castor and other cash crops like Chillies, Tobacco are grown. 'Jhola' cultivation which consists of reclaiming stream and river beds by terracing is generally practiced for growing Dalva rice.

VEGETATION AND MEDICINAL FLORA:

The vegetation of both Koraput and Phulbani districts are of tropical dry and mixed deciduous type with a few moist deciduous pockets scattered here and there Scrub is generally found in the outskirts of these forests and seems to be the resultant of ruthless destruction of the existing forests by man Aquatic and marshy vegetation is found in and around water tanks, reservoirs, streams and rivers and also about cultivated fields

A) Koraput District:

Koraput - Jeypore - Kalimela forests (Jeypore Forest Division) :

Koraput is on a plateau of about 900 m and Jeypore on 600 m. The plateau gradually slope down towards Malkangiri - Kalimela forests The area hosts extensive, rugged moutain ranges with their peaks often reaching upto 1150 m presenting several water falls and perennial hill streams.

The survey revealed the frequent occurrence of the following medicinal plants·

Triphala, Irimeda, Apamarga, Ankola, Matsyakshi, Tanduleeya, Swarna-Ksheeri, Kurantaka, Rakta punarnava, Chakramarda, Jyotishmati, Madhuka, Mandukaparni, Amaravalli, Durva, Musta,

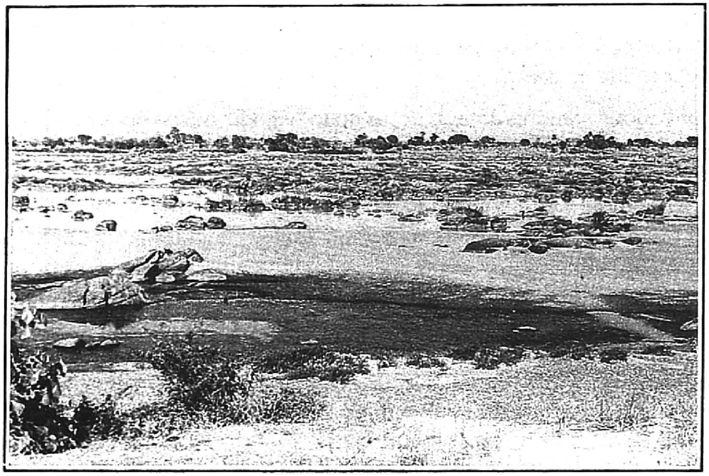


Fig. No. 15
River bed Vegetation :
Mahanadi River, Boudh

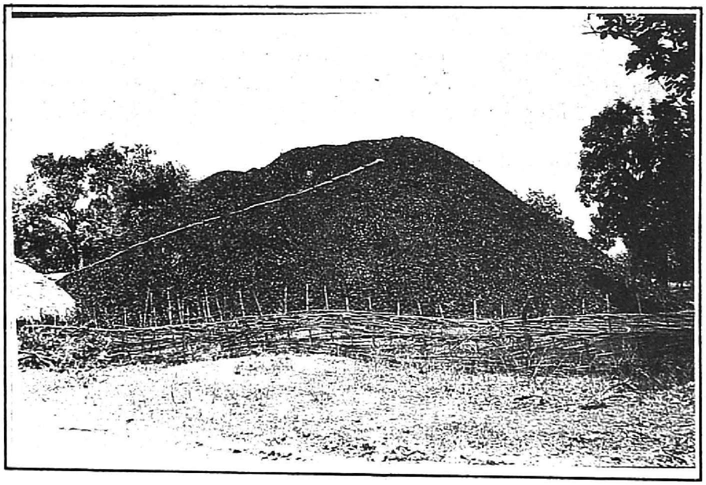


Fig. No. 16
Charcoal : Several Medicinal plants might have met with their grave in this `Hill of Charcoal'

Virataru, Tinduka, Dugdhika, Vata, Kakodumbarika, Udumbara, Aswatha, Kashmaree, Swetasariva, Jingini, Amra, Lajjalu, Shigru, Ajaka, Syonaka, Karanja, Bijasara, Eranda, Kosamra, Sala, Mamsarohini, Mundi, Kateera, Patala, Jambu, Amlika, Saka, Arjuna, Peeta Karavira etc.

Chandana (*Santalum album* Linn.) is common in and around Jeypore - Koraput ghat belt. Sala (*Shorea robusta* Gaertn.f.) is found in plenty between Malkangiri and Jeypore. Madhuka [*Madhuca longifolia* (Koen.) Mac Bride var *latifolia* (Roxb) Chev.], Dhava [*Anogeissus latifolia* (Roxb.ex DC.) Bedd.], Kateera (*Sterculia urens* Roxb), Kumbhi (*Careya arborea* Roxb.), Priyala (*Buchanania lanzan* Spreng) are quite abundant in and around Malkangiri and Kalimela. Panasa (*Artocarpus heterophyllus* Lamk.) is common throughout the Jeypore Forest Division Out of the 'Triphala' Vibhitaka - *Terminalia bellirica* (Breyn ex Gaertn) Roxb. is the commonest. Marica (*Piper nigrum* Linn.) and Ela [*Elettaria cardamomum* (Linn) Maton] are also cultivated at Pottangi Research Garden.

In Jeypore Forest Division, plantations of Coffee, Pepper, Cardomom, Sandalwood were also raised by the former Maharajah of Jeypore.

The main ingredients of the Triabal and Folk medicine of the area include the following 'herbs':

Solanum incanum, Amaranthus spinosus, Euphorbia hirta, Cassia tora, Sterculia urens, Alangium salviifolium, Terminalia arjuna, Terminalia bellirica, Madhuca longifolia var *latifolia, Schleichera oleosa, Vanda tessellata, Dillenia pentagyna, Holarrhena antidysenterica, Cassia fistula, Hemidesmus indicus, Tephrosia purpurea, Jatropha curcas, Phoenix sylvestris, Solanum surattense, Achyranthes aspera, Stereospermum suaveolens, Cyperus rotundus, Eucalyptus spp , Mucuna pruriens, Gardenia gummifera, Curcuma angustifolia, Acacia leucophloea, Soymida febrifuga, Cuscuta reflexa, Corchorus spp , Zizyphus mauritiana, Allium sativum, Borassus flabellifer, Cocos nucifera, Sphaeranthus indicus, Oroxylum indicum, Ocimum americanum, Piper nigrum, Abrus precatorius, Coccinia grandis, Momordica charantia, Calotropis gigantea, Pavetta tomentosa, Vitex negundo, Plumbago zeylanica, Dichrostachys cinerea, Vetiveria zizanioides, Cocculus hirsutus* and *Barleria prionitis*

Chitrakonda and Bonda hills (Jeypore Forest Division):

Chitrakonda with its height reaching above 700 m is the place where Balimela Hydro-Electric-Power House with 6 turbines was constructed across the river Sileru. The left bank of the river borders the State of Andhra Pradesh where Sileru-Hydro-Electric-Power House with two turbines is situated. Most of the valley area is submersible due to these two projects.

The vegetation of the area is mainly of dry deciduous and mixed forests Here 'Madhuka' is common but 'Sala' is conspicuous by its absence. The tribals living in this area are mostly 'Koyas'.

Bonda hills, the upper Machkund catchment area near Govindapalli-Khairput are occupied by a primitive tribe of Austro-Asiatic origin Most of the forests are destroyed by 'shifting' and 'Jhola' cultivation. However, some pure patches of undistributed moist deciduous vegetation are seen where felling of trees is a taboo, being the places of worship. Here, tree species such as *Michelia champaca* Linn. and plenty of *Mangifera indica* Linn are seen hosting climbers such as *Gnetum ula* Brongn. and *Hiptage benghalensis* (Linn) Kurz

Both Chitrakonda and Bonda hills are rich in Tribal and Folk medicine. The plants used in the treatment include·

Calotropis gigantea, Euphorbia hirta, Sida cordifolia, Asparagus racemosus, Andrographis paniculata, Hemidesmus indicus, Vitex peduncularis, Ficus hispida, Centella asiatica, Ardisia

Fig. No. 17
Black Pepper & Cardamom Plantations :
-- Pottangi Experimental Garden

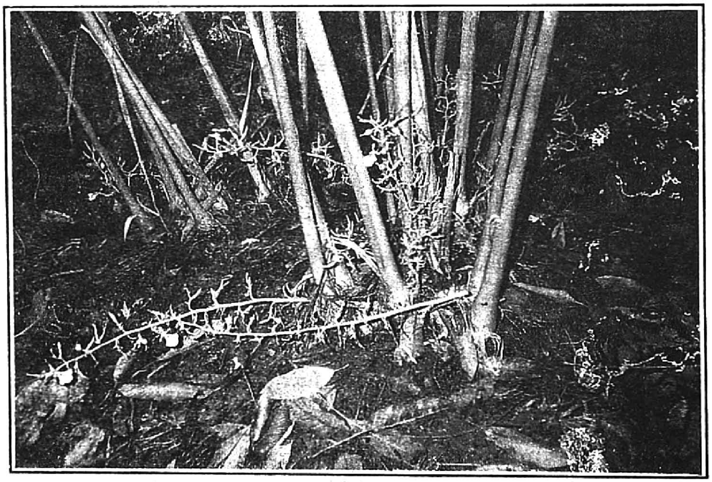


Fig. No. 18
Elettaria cardamomum in flowering
-- Pottangi Experimental Garden

solanacea, Sterculia urens, Solanum surattense, Abrus precatorius, Desmodium gangeticum, Cleome viscosa, Rauvolfia serpentina, Heliotropium indicum, Borreria articularis, Aerva lanata, Baliospermum montanum, Cipadessa baccifera, Mimosa pudica, Mangifera indica, Soymida febrifuga, Phoenix acaulis, Hibiscus rosasinensis, Urginea indica, Curculigo orchioides, Ficus semicordata, Vanda tessellata, Acacia torta, Terminalia bellirica, Celastrus paniculatus, Plumbago zeylanica, Milletia extensa, Costus speciosus, Bryophyllum pinnatum, Desmodium triflorum, Smilax zeylanica etc.

Metpad Forests (Jeypore Forest Division):

'Sala' is the most dominent tree species around Metpad. *Gardenia gummifera, Nyctanthes arbortristis, Toona ciliata, Pterocarpus marsupium, Bombax ceiba, Buchanania lanzan, Schleichera oleosa, Semecarpus anacardium, Mangifera indica, Terminalia bellirica, Phyllanthus emblica, Gmelina arborea* etc , are some other medicinal plants found in this area.

Around Gupteswar caves *Piper longum* is observed in wild condition growing in the cool forest under-growth. *Barringtonia acutangula* is a common tree along the ledge of the Kolab (Sabari) river flowing nearby.

The following plants are used in the local Folk medicine *Careya arborea, Soymida febrifuga, Acacia sinuata, Tinospora cordifolia, Cyperus rotundus, Toona ciliata, Andrographis paniculata, Azadirachta indica, Erythrina indica, Woodfordia fruticosa, Lygodium flexuosum, Pterocarpus marsupium, Bridelia retusa, Buchanania lanzan, Syzygium cumini, Hemidesmus indicus, Cissampelos pareira, Gmelina arborea, Oroxylum indicum, Aegle marmelos, Stereospermum suaveolens, Premna latifolia, Piper longum, Calotropis gigantea, Plumeria acuminata, Rubia cordifolia, Phyllanthus reticulatus, Leucas lavandulaefolia, Barringtonia acutangula, Ardisia solanacea, Amorphophallus rex, Rauvolfia serpentina, Mallotus philippensis, Crateva* sp., etc.

Umerkote Forests (Nowrangapur Forest Division):

Umerkote falls under Dandakaranya Project area where Bangla Desh Refugee Settlements are situated. Most of the 'Sala' forests were cleared of for the above settlement. Here, 'Rasna Jadi' (*Blepharispermum subsessile* DC.) is seen in plenty under the shade of 'Sala' forests. While 'Rasna Jadi' is a revenue earner for the Forest Department of the bordering Bastar district of Madhya Pradesh, no such attempt, to tap this 'Minor Forest Produce', it seems, has been made by the counter parts in Koraput district.

Of the other medicinal plants used in the Folk medicine, the following are worth mentioning:

Rauvolfia serpentina, Cissus quadrangularis, Pueraria tuberosa, Acacia leucophloea, Smilax zeylanica, Semecarpus anacardium, Coccinia grandis, Terminalia alata, Asparagus racemosus, Ougeinia oojeinensis, Tridax procumbens, Artocarpus heterophyllus, Moringa oleifera, Mimosa pudica, Grangea maderaspatana, Coldenia procumbens etc.,

It is quite interesting to note that *Tridax procumbens* Linn , a common weed whose leaf juice has healing property on fresh wounds and cuts is called by a very Sashtric name 'Bisalya Karani' by Gonds of this area.

Rayagada - Laxmipur Forests (Rayagada Forest Division):

Rayagada - Laxmipur forests are very rich in flora hosting many important medicinal plants in abundance. *Pueraria tuberosa* (Vidari) is plentiful *Gmelina arborea, Oroxylum indicum, Ailanthus excelsa, Terminalia bellirica, Baliospermum montanum, Aegle marmelos. Curcuma angustifolia,* and several others are seen everywhere. Thus, Rayagada town deserves to be developed as a 'Centre for Procurement for Raw Drugs'.

Muniguda - Chandrapur Forests (Rayagada Forest Division):

Muniguda forèsts are also of mixed type though *Shorea* (Sala) is dominant particularly around Chandrapur, an area infested with wild elephants. Of the other medicinal plants, *Buchanania lanzan* and *Semecarpus anacardium* are in abundant quantities. *Cycas circinalis* Linn. is noticed in Chandrapur forests The underground part of the *Cycas* is somewhat sweet in taste and almost resembles the bazaar sample of 'Vidari'

The following plants are used in the Folk-medicine recorded from Rayagada and Muniguda Areas:

Cissampelos pareira, Achyranthes aspera, Catunaregam spinosa, Alstonia scholaris, Vitex negundo, Grewia tiliifolia, Helicteres isora, Capparis zeylanica, Soymida febrifuga, Schleichera oleosa, Azadirachta indica, Sansevieria sp., *Euphorbia hirta, Pergularia daemia, Toddalia asiatica, Ficus benghalensis, Tinospora cordifolia, Solanum surattense. Alangium salviifolium, Elephantopus scaber, Ficus religiosa. Holarrhena antidysenterica, Woodfordia fruticosa. Aegle marmelos, Curculigo orchioides, Vanda tessellata, Cycas cicinalis. Oroxylum indicum. Ageratum conyzoides, Tephrosia purpurea* etc.

B) Boudh-Khondmals (Phulbani) District :

The district is divided into three Forest Divisions, namely Phulbani, Balliguda & Boudh Forest Divisions. The vegetation of Phulbani district is of dry and moist deciduous forests. 'Sala' is dominant and often possessing 'pencil-straight' boles. The general flora of the district includes the following taxa.

Madhuca longifolia var *latifolia. Lagerstroemia parviflora, Buchanania lanzan. Terminalia arjuna, Terminalia bellirica, Terminalia alata. Ficus benghalensis, Ficus religiosa, Ficus racemosa. Holarrhena antidysenterica, Azadirachta indica, Adina cordifolia, Acacia torta. Phyllanthus emblica. Anogeissus latifolia, Shorea robusta, Morinda tomentosa. Syzgium cumini, Syzygium operculatum* var. *obovata, Calycoptersis floribunda, Soymida fabrifuga, Bauhinia racemosa, Bauhinia purpurea, Bauhinia roxburghiana, Butea monosperma, Butea superba, Careya arborea. Phoenix sylvestris,*

Phoenix acaulis, Ougeinea oogeinensis, Mitragyna parvifolia, Cleistanthus collinus, Stereospermum personatum, Catunaregam uliginosa, Cassia fistula, Alangium salviifolium, Bombax ceiba, Schleichera oleosa, Dalbergia paniculata, Pterocarpus marsupium, Semicarpus anacardium, Caryota urens, Dillenia pentagyna, Garuga pinnata, Sterculia urens, Woodfordia fruticosa, Asparagus racemosus, Milletia extensa, Flemingia strobilifera, Elephantopus scaber, Diospyros exsculpta (*D tomentosa* Roxb), *Bridelia retusa, Artocarpus heterophyllus, Artocarpus lacucha, Vitex negundo, Callicarpa arborea, Thysanolaena maxima, Casearia graveolens, Tectona grandis, Aegle marmelos, Dendrocalamus strictus, Bambusa arundinacea, Wendlandia tinctoria, Tinospora cordifolia, Ventilago denticulata, Schefflera venulosa, Celastrus paniculatus, Boswellia serrata, Litsea glutinosa, Acacia leucophloea, Cochlospermum religiosum, Gardenia gummifera, Zizyphus rugosa, Indigofera cassioides, Ixora arborea, Olax scandens, Combretum roxburghii, Scindapsus officinalis, Pittosporum floribundum, Ailanthus excelsa, Limonia acidissima (Feronia elephantum* Corr *), Cayratia trifolia, Albizia lebbeck, Gmelina arborea, Toona ciliata, Clerodendrum viscosum, Clerodendrum serratum, Cipadessa baccifera, Cissampelos pareira* etc.

The whole district, except for Boudh area, looks like a 'Garden of Jack trees' The Forest Department has restricted the felling of Jack trees in the District along with a few more tree species of food value for the benefit of the local tribals At Ranipathar about Phulbani, the District Head Quarters, the Forest Department is raising Pepper Vines. At Kalinga near G Udayagiri, there is a Forest Research Garden where Black pepper, Cinnamomum, Coffee, Cardamoms, Rauvolfia etc , are raised.

Various plant species used in the Folk medicine of Phulbani district are :

Lawsonia inermis, Curcuma longa, Vernonia cinerea, Ageratum conyzoides, Cassia fistula, Euphorbia hirta, Thevetia peruviana, Moringa oleifera, Justicia adhatoda, Solanum surattense, Cyperus rotundus, Jatropha curcas, Tinospora cordifolia, Martynia annua, Dalbergia latifolia, Semecarpus anacardium, Butea monosperma, Cuscuta reflexa, Vitex negundo, Phyllanthus amarus, Plumbago rosea, Hibiscus rosasinensis, Mangifera indica, Madhuca longifolia var. *latifolia, Syzygium cumini, Schleichera oleosa, Bombax ceiba, Acacia leucophloea, Datura metel. Ficus benghalensis, Tamarindus indica, Cycas circinalis, Rauvolfia serpentina, Nyctanthes arbortristis, Aegle marmelos, Sida cardata, Tephrosia purpurea, Cocculus hirsutus, Woodfordia fruticosa, Cajanus cajan, Strychnos nuxvomica, Asparagus racemosus, Alstonia scholaris, Thespesia populnea* etc

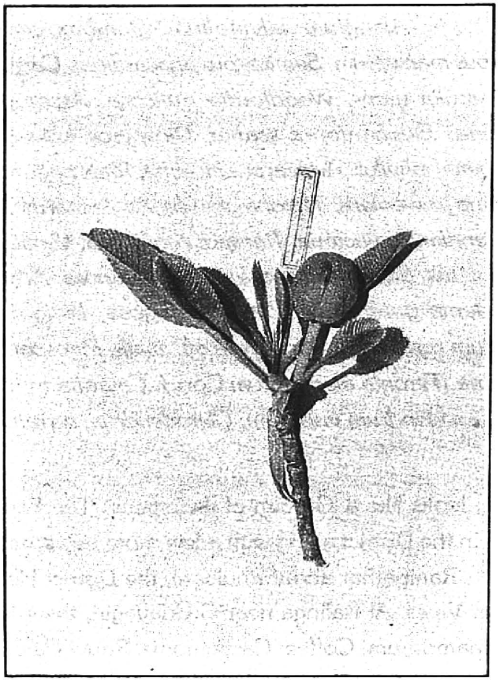


Fig. No. 19
Dillenia aurea : A fruiting twig

Fig. No. 20
Cochlospermum religiosum :
A gum-yielding tree in flowering

CHAPTER - II

THE FLORA

All the Angiospersms collected and observed during explorations of Phulbani & Koraput districts are enumerated in the following pages, in accordance with Bentham & Hooker's System of classification covering 140 Families, 489 Genera and 726 Species. However, in a few cases the circumscription of the families as given by Hutchinson (1973) and followed widely in subsequent important works has been adopted In case of Ferns and Fern-allies the families have been listed alphabetically. For the sake of convenience, the genera under a family and the species under a genus have been arranged in alphabetical order. Nomenclature has been brought uptodate mostly following Bennett (1987) Phenological data, relative abundance and distribution (A&D) in the area, locality, field number and Sanskrit & local (vernacular) names mostly of Oriya, have been provided for each plant The herbarium specimens collected during the explorations are lodged in the respective herbaria of Regional Research Centre (Ay), Vijayawada and Central Research Institute (Ay.), Bhubaneswar.

The following abbreviations are used in enumeration :

S . Sanskrit Name	V · Vernacular Name	cm : Centimetre	m : Metre
A1 : Solitary	A2 : Few	A3 : Abundant	A4 : Most Abundant
D1 : Rare	D2 : Infrequent	D3 · Common	D4 . Quite Common

Enumeration of the species collected & observed :

RANUNCULACEAE

Clematis gouriana Roxb ex DC.

Perennial climber in fruiting. On way from Belghar to Jhiripani, Chitrakonda to Sileru. *Sharma* 2474. (A2 D2)

Clematis roylei Rehder.

(*C. nutans* Royle)

Perennial climber. Flowers pale whit Belghar forests and also other forest areas of Phulbani district. *Sharma* 2446. (A2 D2)

DILLENIACEAE

Dillenia aurea Sm.

V : Kermetta, Omamb, Ravuli

Small tree Fruit with persistent, accrescent, fleshy calyx. Ramgiri - Gupteshwar. *Hemadri* 3866. (A2 D2)

Dillenia pentagyna Roxb.

V : Ravuli, Ravi, Railgatcho

Medium sized or large tree. Ripe fruits orange-yellow, about 2 cm across. Metpad, Daringbadi.

Hemadri 3882, *Sharma* 2986. (A2 D3)

MAGNOLIACEAE

Michelia champaca Linn.

S : Champaka. V Bod Champa, Champa

Large tree. Flowers orange - red, sweet-scented Fruit of many free carpels. Rare in wild state; also planted. Bonda hills (wild), Kalinga (planted). *Hemadri* 3984.

ANNONACEAE

Annona reticulata Linn.

S : Ramaphala V . Ramphalo

Small tree, grown for its edible fruit, in both the districts.

Annona squamosa Linn.

S : Sitaphala. V : Sitaphalo

Small tree, grown in both the districts, for its edible fruit.

Miliusa velutina (Dunal) Hook. f. et Thoms.

V : Gandhasai

Tree with tomentose leaves and bunches of sweet, fleshy, purple berries formed by free carpels. Metpad, also observed in Phulbani district *Hemadri* 3876. (A2 D2)

Uvaria hamiltonii Hook. f. et Thoms.

V . Lakankuli

Large woody climber. Flowers red. Found along streams in cool places. Daringbadi. . *Sharma* 2952. (A2 D2)

MENISPERMACEAE

Anamirta cocculus (Linn.) Wt. et Arn.

S : Akatbindu

Perennial climber. Flowers green. Daringbadi. *Sharma* 2907. (A1 D2)

Cissampelos pareira Linn.

S : Patha. V : Okanabindu, Okatbindu, Akatbindu, Chattimal, Dindanimada, Ghodakur; Bodi (Telugu).

Perennial climber. Flowers dioecious, green Bonda hills, Beheda, Balliguda, Daringbadi *Hemadri* 3846, *Narayanappa* 2276, *Sharma* 2907, 3028 & 3081. (A2 D3)

Cocculus hirsutus (Linn.) Diels

S : Patalgarudi, Chilahinta. V : Musakani, Duseriteega (Telugu)

Perennial climber in fruiting. Kalinga, also observed in most of the forest localities of both

the districts. *Narayanappa* 2218. (A3 D3)

Pericampylus incanus Miers

V · Duapar

Perennial climber. Flowers green. Belghar. *Sharma* 2445. (A1 D2)

Tinospora cordifolia (Willd.) Miers ex Hook. f. et Thoms.

S : Guduchi. V : Goluchi, Guluchimaala, Guluchiloho, Koyivahimaada

Perennial climber. Stem and leaf glabrous. Found climbing over trees in vegetative condition near Ramgiri, Gupteswar Forests; also in Phulbani district. (A2 D2)

Tinospora sinensis (Lour.) Merr.

S : Guduchibheda. V : Goluchi, Koyivahimaada

Large, perennial climber. Stem and leaf tomentose. Found climbing over the trees in vegetative condition near Metpad. (A2 D2)

NYMPHAEACEAE

Nymphaea nouchali Burm. f.

S : Kumuda. V : Koyiphulo

Aquatic plant with tuberous root. Leaves orbicular, cordate. Flowers white, purple or red. Found in ponds & tanks. Balliguda, also found in other localities of both the districts. *Sharma* 3200 (A2 D2)

NELUMBONACEAE

Nelumbo nucifera Gaertn.

S : Kamala V : Daamora, Kamal

Aquatic plant with tuberous root. Flowers red. Found in water tanks in both the districts. (A2 D2)

PAPAVERACEAE

Argemone mexicana Linn.

S : Swarna ksheeri. V · Kheera Konta, Morati

Herb with yellow flowers. Whole plant prickly including capsules. Common weed in waste lands of both the districts. (A3 D3)

BRASSICACEAE

Rorippa montana *(Wall ex Hook. f. et Thoms.) Small*

Annual herb with lyrate leaves. Fruits linear Growing as a weed in pepper plantations.

Pottangi. *Hemadri* 3805x & 3992. (A2 D2)

CAPPARACEAE

Capparis zeylanica Linn.

S . Vyaghranakhi ? V : Sabbi (Telugu)

Perennial straggling shrub with hooked spines. Found in both the districts. (A2 D2).

Crateva roxburghii Br. ex Wt. et Arn.

S . Varuna V : Baruna gatch

Tree in vegetative condition, found near Metpad forest rest house. (A1 D2)

CLEOMACEAE

Cleome gynandra Linn.

(*Gynandropsis pentaphylla* DC.)

S : Sveta suvarchala. V . Balakutni

Erect herb. Flowers white. Found in waste places. Beheda *Narayanappa* 2273. (A2 D2)

Cleome monophylla Linn.

Erect, annual herb Flowers purple. Gurupriyo river bed, near Chitrakonda. *Hemadri* 3835x. (A2 D2)

Cleome viscosa Linn.

S : Peeta suvarchala. V : Bonjira, Jangali jira, Ano sarison

Erect herb. Flowers yellow. Found in waste places. Nuagam (near Balliguda); also near Gurupriyo river, Chitrakonda. *Sharma* 3090. (A3 D3)

VIOLACEAE

Hybanthus enneaspermus (Linn.) F.v. Muell.

[*Ionidium suffruticosum* (Linn.) Ging. ex DC.]

V : Madanamastu

Perennial herb in bluish pink flowers and globose capsules. Nakdisaroo (near Phulbani); also observed in Koraput district. *Hemadri* 3955. (A2 D3)

BIXACEAE

Bixa orellana Linn.

V : Jampra

Large shrub or small tree. Fruits spiny with orange-red seeds. Planted in Kalinga experimental garden.

COCHLOSPERMACEAE

Cochlospermum religiosum (Linn) Alston

S : Galgal, Pitakarpasa. V . Gongal

Small tree in vegetative condition. Leaves palmately lobed. Chandrapur, also found in Phulbani district *Hemadri* 3934. (A2 D3)

FLACOURTIACEAE

Casearia elliptica Willd.

V : Rogoda

Large shrub. Leaves tomentose Found in both the districts. (A2 D2)

Casearia graveolens Dalz.

V : Kokra, Patakalu, Kidihi, Kirchi, Mando

Large shrub. Leaves glabrous. Fruits ellipsoid, greenish-yellow. Seeds scarlet. Dudhbeda near Metpad, Balliguda, Kalinga. *Hemadri* 3874, *Sharma* 2857, *Narayanappa* 2147. (A2 D2)

Flacourtia indica (Burm.f.) Merr.

S : Sruva Vriksha

Small thorny tree. Kalinga; also found in other forest localities of both the districts. *Narayanappa* 2143 (A2 D3)

PITTOSPORACEAE

Pittosporum napaulense (DC.) Rehder et Wilson

(*P. floribundum* Wt. & Arn.)

V : Khodabari

Small tree in umbellate greenish - white flowers. Kalinga - G. Udayagiri, Daringbadi. *Hemadri* 3978, *Sharma* 2965.(A2 D2)

POLYGALACEAE

Polygala erioptera DC.

Herb with many sub-erect or diffuse branches. Leaves linear, linear-oblong or elliptic. Flowers yellow. Balliguda. *Sharma* 3039. (A2 D2)

Polygala longifolia Poir.

(*P. leptalea* DC.)

Erect herb. Leaves linear Flowers pink. Kotagarh, Balliguda *Sharma* 3098 & 3174. (A1 D2)

PORTULACACEAE

Portulaca oleracea Linn.

S : Brihallonika. V : Lunia

Fleshy herb in yellow flowers and circumcissally dehiscing fruits. Kalimela; also observed in Phulbani district. *Hemadri* 3824. (A2 D3)

Portulaca quadrifida Linn.

S · Lonika

Small herb forming mats in moist situations. Flowers yellow Rayagada; also found in Phulbani district. *Hemadri* 3926. (A2 D2)

TAMARICACEAE

Tamarix ericoides Rottl

Perennial shrub forming clumps in the Mahanadi river bed in vegetative condition; also found in Kolab river bed of Koraput district. (A3 D2)

DIPTEROCARPACEAE

Shorea robusta Gaertn. f.

S: Sala V: Salo, Rengal, Sargi gatcho

Large tree with long straight trunk. Fruits winged. One of the most common species in both the districts. Dudhbeda (near Metpad) Kalinga, Balliguda, Daringbadi. *Hemadri* 3879, *Sharma* 2848. (A4 D3)

CLUSIACEAE

Mesua ferrea Linn.

S : Nagakesara. V: Nagesuar

Tree in fruiting Planted. Kalinga. *Narayanappa* 2128

MALVACEAE

Abelmoschus crinitus Wall.

(*Hibiscus cancellatus* Roxb.)

V : Bana bhindi, Bond ki phul

A very hirsute herb Flowers yellow, showy. Balliguda. *Sharma* 3013 & 3169; also found along the Gurupriyo river bed, about Chitrakonda (Koraput district.). (A2 D2)

Abelmoschus esculentus (Linn) Moench

(*Hibiscus esculentus* Linn.)

V : Bhinda V . Bendi

The `Lady finger', cultivated for its vegetable fruit, in both the districts.

Abutilon indicum (Linn.) Sweet

S : Atibala. V · Biley phulo

Large perennial herb or undershrub in flowering & fruiting. Found in waste places. Kalinga, Beheda, also in other areas of both the districts. *Narayanappa* 2231 & 2321. (A3 D3)

Fioria vitifolia (Linn)Mattei

(*Hibiscus vitifolius* Linn.)

V · Gura

Erect herb or undershrub. Flowers yellow or orange-yellow with purple spots. Fruits winged Found in open places. Nuagam (near Balliguda); also observed in Koraput district. *Sharma* 3098. (A2 D3)

Hibiscus rosa-sinensis Linn.

S : Japa. V : Mandar

The 'China Rose', planted in gardens of both the districts.

Kydia calycina Roxb.

V : Barang, Bharango gatcho, Vada

Small tree in fruiting Belghar, Beheda, Chandrapur, *Sharma* 2429, *Narayanppa* 2325. (A3 D3)

Malvastrum coromandelianum (Linn.) Garcke

A weed of waste lands. Flowers orange-yellow. Kotagarh; also observed in Koraput district. *Sharma* 2493. (A2 D3)

Sida acuta Burm.f.

S . Bala bheda. V : Bajromuli

Erect woody herb in flowering & fruiting. Found in waste places and along road side. Belghar, Nuagam (near Balliguda), Hathigam. *Sharma* 2451 & 3087, *Narayanapppa* 2373. (A3 D4)

Sida cordata (Burm f.) Borss.

(*S. veronicifolia* Lamk)

S : Nagabala. V : Biskapari, Bisakhapari, Undrabadni

Prostrate or ascending herb in flowering & fruiting. Common weed in both the districts. Boudh, Kotagarh, Daringbadi, Barakhambha forest (near Balliguda), Behada. *Hemadri* 3962, *Sharma* 2519, 2919 & 3173, *Narayanappa* 2258. (A3 D3)

Sida cordifolia Linn.

S : Bala V : Bajromuli

Erect herb in flowering & fruiting. Growing as a weed in both the districts. Ladda (near Rayagada), Jhirpani, Daringbadi. *Hemadri* 3913, *Sharma* 2477 & 2920. (A2 D3)

Sida rhombifolia Linn.

S : Mahabala. V . Bajromuli

Erect - ascending woody herb in flowering & fruiting. Leaves rhomboid. Hathigam, also observed in Chitrakonda. *Narayanappa* 2342. (A2 D2)

Thespesia lampas (Cav.) Dalz et Gibs.

S : Bharadwaji. V : Bontikigatch

Erect herb. Flowers yellow. Kalinga; also observed in other forest localities in both the districts. *Narayanappa* 2267. (A2 D3)

Thespesia populnea (Linn) Soland. ex Corr

S : Parisha

Tree in yellow flowers with purple centre. Fruit disc- like with long stalk. Planted in Kalinga forest garden.

Urena lobata Linn

V : Jatjotia, Jangolo joto, Chirti

Erect undershrub. Flowers pink. Fruits echinate. Belghar, Kalinga; also observed in various localities in both the districts. *Sharma* 2404, *Narayanappa* 2226. (A2 D3)

Urena repanda Roxb.

V : Jogada

Undershrub or shrub. Branches densely hairy. Flowers pink. Barakhambha forest (near Balliguda). *Sharma* 3159. (A2 D2)

Urena sinuata Linn.

V : Chirti

Erect undershrub. Fruits echinate. Common weed on road side and waste places. Kotagarh, Kalinga. *Sharma* 2514, *Narayanappa* 2243. (A3 D3)

BOMBACACEAE

Bombax ceiba Linn.

S : Salmali. V : Semli, Semuli, Similikonta

Tree in vegetative condition or in flowering, abundantly found in both the districts. (A3 D3)

Note: At Gupteswar trees with unarmed trunks are observed, which need attention

STERCULIACEAE

Byettneria herbacea Roxb.

Woody perennial herb. Fruits echinate. Found in forest undergrowth. Balliguda, Beheda; also observed in Chandrapur. *Sharma* 3146, *Narayanappa* 2264. (A2 D3)

Eriolaena hookeriana Wt. & Arn

V : Kudali, Bonta

Shrub-small tree Young shoots densely stellately scaly. Leaves often white or grey tomentose beneath Flowers yellow. Capsule ovoid, corrugate or tubercled. Balliguda. *Sharma* 2915 & 3128. (A2 D3)

Firmiana colorata (Roxb.) R. Br.

(*Sterculia colorata* Roxb.)

V : Sembar kudal (Bonda dialect)

Small tree. Flowers orange-red. Fruits of open carpels with marginal seeds. Bonda hills. *Hemadri* 3847 & 3848. (A2 D2)

Helicteres isora Linn.

S : Avartani. V : Alti, Vappali, Vandaidor, Antia

Shrub in fruiting. Follicles twisted. Common throughout the forest areas in both the districts. Belghar, Kalinga *Sharma* 2427, *Narayanappa* 2145. (A3 D3)

Melochia corchorifolia Linn.

Erect or diffuse woody herb in fruiting. Simanbadi, Balliguda; also observed near Gurupriyo river, Chitrakonda. *Sharma* 2941 & 3137. (A2 D3)

Pterospermum xylocarpum (Gaertn.) Sant. et Wagh

(*P. heyneanum* Wall. ex Wt. et Arn.)

V : Mutchukunda

Tree in long flowers and woody, dehiscent fruits. Few, found near Gupteswar caves; also found in Phulbani district. (A2 D2)

Sterculia guttata Roxb.

V : Podam

Tall tree with entire, ovate, leaves. Few, found in Ladda forests near Rayagada. (A2 D2)

Sterculia urens Roxb.

S : Kateera. V : Gendli, Genduli, Katila

Tree with whitish, papery bark. Leaves palmately lobed. Inflorescense viscidly pubescent. Balliguda, Kalinga; also found in Koraput district *Sharma* 2532, *Narayanappa* 2137. (A2 D3)

Sterculia villosa Roxb.

V : Kodali (Bonda dialect)

Tree in vegetative condition. Leaves palmately deeply sinuately lobed. Few, found in Bonda hill forests; also in Phulbani district. (A2 D2)

Waltheria indica Linn

Perennial, hoary - tomentose herb in flowering. Balliguda. *Sharma* 3131. (A2 D3)

TILIACEAE

Corchorus aestuans Linn.

V : Kukurjhuntia; Budda nalitha (Telugu)

Erect or sub-erect woody herb. Flowers yellow. Common weed. Kurtumgarh (near Balliguda); also observed around Kalimela & Chitrakonda. *Sharma* 3062 (A2 D3)

Corchorus capsularis Linn.

S : Kalasaka

Erect herb. Flowers yellow. Balliguda. *Sharma* 3142. (A2 D2)

Corchorus trilocularis Linn.

V : Jangli jiraa

Erect, woody herb in dehiscent, trilocular elongate fruits. Few, found about Kalimela and Chitrakonda; also in Phulbani district. (A2 D2)

Grewia abutilifolia Vent. ex Juss.

Perennial shrub. Flowers whitish. Beheda, Daringbadi. *Narayanappa* 2318, *Sharma* 2955. (A2 D2)

Grewia asiatica Linn

S : Parusaka

Small tree in fruiting. Daringnbadi. *Sharma* 2455. (A2 D2)

Grewia elastica Royle

Small tree in fruiting. Dasingbadi forest, Daringbadi. *Sharma* 2961. (A2 D2)

Grewia hirsuta Vahl

S : Gudasarkara, Gangeruki. V : Kakarolim; Kukka budda alam (Telugu).

Erect, woody undershrub. Kalinga; also found around Rayagada. *Narayanappa* 2245. (A3 D3)

Grewia pilosa Lamk

Shrub. Flowers whitish. Balliguda. *Sharma* 3130. (A2 D2)

Grewia rothii DC.

Undershrub or shrub Leaves ashy beneath. Flowers yellow. Balliguda, Kalinga, Beheda; also observed in Bonda hills. *Sharma* 2867 & 3018, *Narayanappa* 2217 & 2247. (A2 D3)

Grewia serrulata DC.

(*G. disperma* Rottl ex Spreng.)

Shrub in fruiting. Jhiripani *Sharma* 2455. (A2 D2)

Grewia tiliifolia Vahl

S ; Dhanavanga, Dhanvana. V : Dhaman, Kehali, Ganguti

Large shrub or small tree. Flowers yellow. Daringbadi, Balliguda, Bonda hills. *Sharma* 2866,2914,2967 & 3079, *Hemadri* 3850. (A2 D3)

Triumfetta pilosa Roth

V : Jottia

Erect herb in fruiting. Kurtumgarh (near Balliguda). *Sharma* 2546. (A2 D2)

Triumfetta rhomboidea Jacq.

V . Chippia, Jotijotia

Perennial herb or undershrub. Fruits glochidiate. Belghar, Balliguda; also found about Rayagada. *Sharma* 2414 & 3127. (A3 D3)

LINACEAE

Linum usitatissimum Linn.

S : Atasi. V : Alsi,Olsi

The `Lin Seed`, cultivated for its oil-yielding seed around Metpad.

Reinwardtia indica Dumort.

[*R. trigyna* (Roxb.) Planch.]

V : Sonaphul

Woody herb. Flowers yellow. Belghar. *Sharma* 2403. (A2 D2)

MALPIGHIACEAE

Hiptage benghalensis (Linn.) Kurz

S : Madhavi. V: Sanna Kavatimaal (Bonda dialect).

A liana climbing over tall trees. Fruits winged. Few, found in Bonda hill forests (A2 D2)

ZYGOPHYLLACEAE

Tribulus terrestris Linn.

S : Gokshura. V . Palleru (Telugu)

Prostrate herb. Flowers yellow. Fruits spiny. Common weed in waste places. Kalinga; also found in Koraput district. *Narayanappa* 2233. (A2 D3)

OXALIDACEAE

Oxalis corniculata Linn.

S : Changeri. V . Ambo chingari

Herb with trifoliolate leaves. Flowers yellow Fruits elongate. Whole plant tasting sour. Pottangi, *Hemadri* 3802; Daringbadi, *Sharma* 2950 & Baliguda, *Sharma* 3027. (A2 D3)

Oxalis richardiana Babu

(*O. intermedia* A Rich.)

V · Am singari

Herb growing in moist cool situations. Roots bulbous. Leaves trifoliolate. Flowers rose coloured. Whole plant tasting sour. Pottangi. *Hemadri* 3809. (A2 D1)

BALSAMINACEAE

Impatiens balsamina Linn.

V : Onon

Erect herb in flowering, running wild (probably as an escape) near Balliguda. *Sharma* 3121.

RUTACEAE

Aegle marmelos (Linn.) Correa

S : Bilva. V : Bel, Bilva

Small trees with thorny branches. Leaves trifoliolate. Fruits ovoid - ellipsoid. Chitrakonda, Boudh. *Hemadri* 3841 & 3964. (A2 D3)

Atalantia monophylla (Roxb.) DC.

S : Atavijambira

Small tree. Branches thorny. Leaf 1-foliolate. Few, found in vegetative condition in both the districts. (A2 D2)

Citrus aurantifolia (Christm.) Swingle

S · Swalpa jambirika. V : Nembu

Small tree, grown for its fruit in both the districts.

Citrus aurantium Linn.

V : Komla

Often grown in tribal settlements, found running wild in Ladda forest near Rayagada.

Glycosmis pentaphylla Correa

V : Saudo

Shrub Leaves pinnately 1-5 foliolate. Fruits globose, pinkish Belghar. *Sharma* 2407.(A3 D3)

Hesperethusa crenulata (Roxb.) Roem.

V : Banobelo

Small tree. Branches thorny Leaves resembling those of 'Kapitha'. Found in vegetative condition near Gupteswar; also in Phulbani district. (A2 D3)

Limonia acidissima Linn.

(*Feronia elephantum* Corr.)

S : Kapitha. V · Koyito

Tree. Branches thorny. Leaves imparipinnate with winged rhachis. Found in globose, woody fruits along Rayagada - Laxmipur forests. (A2 D2)

Micromelum minutum (Forst.f.) Wt. et Arn.

(*M.pubescens* Blume)

Small tree. Fruits ovoid, yellow. Dasingbadi forest (near Daringbadi). *Sharma* 2963.(A1 D1)

Murraya koenigii (Linn) Spreng.

S Surabhinimba. V : Mirsing pothro, Lesunadando

Shrub or small tree with imparipinnate leaves. Flowers white. Dasingbadi forest (near Daringbadi), Bonda hills *Sharma* 2969, *Hemadri* 3853. (A2 D2)

Toddalia asiatica Lamk.

V : Konta kasinda

Straggling shrub. Whole plant prickly; leaves 3-foliolate. Few, found in vegetative condition about Panimunda near Muniguda, also in Phulbani district. (A2 D2)

Zanthoxylum armatum DC.

(*Z.alatum* Roxb.)

S : Tumburu. V . Ranabelli

Large shrub - small tree profusely armed all over with broad based prickles. Leaves winged, imparipinnate aromatic. Fruits green, globose, tubercled, in axillary panicles, orange - yellow at maturity, dehiscing into 2 halves, aromatic. Frequent in the Podia-Sonki forests. (A2 D1)

FLINDERSIACEAE

Chloroxylon swietenia DC.

V : Bheru gatcho

Small tree. Leaves aromatic . Found in vegetative condition about Rayagada; also in Phulbani district. (A3 D3).

SIMAROUBACEAE

Ailanthus excelsa Roxb.

S : Aralu. V : Mundayigatch

Tall tree. Leaves very large, imparipinnate. Found in vegetative condition in Bonda hill forests, Rayagada etc., also observed in Phulbani district .(A2 D2)

OCHNACEAE

Ochna squarrosa Linn.

Small tree in fruiting. Daringbadi, Kalinga. *Sharma* 2916, *Narayanappa* 2206.(A2 D2)

BURSERACEAE

Boswellia serrata Roxb. ex Colebr.

S : Shallaki .V : Salai

Small tree. Outer bark forming into flakes. Leaves imparipinnate, somewhat hairy when tender. Chandrapur; also observed in Phulbani district. *Hemadri* 3935 (glabrous variety).(A2 D3)

Bursera serrata Colebr.

V : Dongsoradi

Small tree in fruiting. Balliguda, Kalinga, *Sharma* 2856, *Narayanappa* 2141 (A1 D2)

Garuga pinnata Roxb

S : Paranki. V : Kekar, Kekad, Kekadogatcho

Tree with pinnate leaves. Fruits greenish-yellow, globose. Chitrakonda to Balimela, Budaguda forest (near Balliguda) *Hemadri* 3843, *Sharma* 2870.

Protium serratum (Wall.ex Colebr) Engl.

V : Modayi

Tall tree. Leaves pinnate.Fruits ovoid, 2-3 lobed, turning red at maturity. Gurupriyo river bank near Chitrakonda; also observed in Phulbani district. *Hemadri* 3828. (A2 D3)

MELIACEAE

Azadirachta indica A.Juss.

S : Nimba. V : Limb, Limbo gatcho, Nimbo; Yaapa chettu (Telugu)

Tree in fruiting. Often found as avenue tree and in wild in both the districts (A2 D3)

Note : Seed is collected in large quantities about Puranacuttak on way to Boudh.

Chukrasia tabularis A.Juss.

Tall tree in white flowers. Planted in Kalinga Forest Experimental Garden.

Cipadessa baccifera (Roth) Miq.

V : Pittamari

Perennial shrub. Flowers greenish-white. Fruits red when ripe. Daringbadi, Nuagam (near Balliguda); also observed around Koraput & Rayagada. *Sharma* 2906 & 3088 (A3 D3)

Melia azedarach Linn.

S : Mahanimba. V : Mahanimbo, Mahalimbo

Large tree. Leaves bipinnately compound Flowers lilac. Planted along road side in both the districts Simanbadi (near Daringbadi) *Sharma* 2940.

Soymida febrifuga A. Juss

S : Mansarohini. V . Omai, Rohini, Ruppuni; Somi (Telugu)

Small tree. Fruits dehiscent. Kalimela-Podia road; also observed in Phulbani district as an avenue tree or in wild state. *Hemadri* 3818. (A2 D3)

Toona ciliata M.J Roem.

(*Cedrela toona* Roxb.)

V : Mahalimba, Mahalimbo

Tree in fruiting. Capsules woody, dehiscent. Seeds winged. Metpad; also observed in other forest localities of Koraput district *Hemadri* 3969 (A2 D2)

OLACACEAE

Olax scandens Roxb.

V : Bodalo, Kurkuti, Hittimada, Badbadolia

Straggling shrub. Flowers greenish-white. Fruits globose, fleshy, orange-yellow when ripe. Ladda (near Rayagada), Kotagarh, Balliguda. *Hemadri* 3911 *Sharma* 2859 & 3095. (A2 D3)

CELASTRACEAE

Cassine glauca (Rottb) O.Ktze

V . Kaalamokha

Tree in vegetative condition. Few, found about Metpad.(A2 D2)

Celastrus paniculatus Willd.

S : Jyotismati V · Pengo, Pengumal, Penglotha

Straggling shrub with lenticellate branches. Fruits globose. Bonda hills, Balliguda, Nuagam (near Balliguda) *Hemadri* 3949, *Sharma* 2861 & 3080. (A2 D3)

Maytenus emarginata (Willd.) Ding Hou

S : Srugvriksha. V : Danti (Telugu)

Bushy shrub or forming erect clumps. Branches thorny. Found in vegetative condition in both the districts. (A2 D3)

RHAMNACEAE

Ventilago denticulata Willd.

(*V.calyculata* Tul.)

V : Pitchuli, Luhamalo

Straggling shrub with reddish fissures on old branches. Fruit winged. Kotagarh, Kalinga, also observed in Koraput district. *Sharma* 2504, *Narayanappa* 2219

Zizyphus glaberrima (Sedg) Santapau

(*Z.xylopyra* var. *glaberrima* Sedg)

V · Ghantolo

Small tree Branches spiny. Leaves glabrous. Fruits greenish, globose, not ashy. Chandrapur; also observed in Phulbani district. *Hemadri* 3894. (A2 D2)

Zizyphus mauritiana Lamk.

S : Badari V : Barkoli; Regu (Telugu)

Large shrub or small tree. Branches spiny. Leaf ashy beneath. Flowers small, green. Nuagam (near Balliguda); also observed throughout both the districts. *Sharma* 3048 (A2 D3)

Zizyphus oenoplia (Linn.) Mill.

S : Vallibadari. V : Kontaikoli

Straggling spiny shrub. Flowers small, green Balliguda; also observed in Koraput district *Sharma* 2500 & 3067. (A2 D3)

Zizyphus rugosa Lamk

V : Tinkoli, Katakoli

Straggling spiny shrub with large green leaves. Fruits white, fleshy, sweet in taste. Bonda hills, Sarangada (Balliguda forest division). *Hemadri* 3865, *Sharma* 2889.(A2 D2)

Zizyphus xylopyrus (Retz.) Willd.

S : Ghonta. V : Ghantolo, Gointh, Chunkuli

Shrub or small tree Branches spiny. Leaves ashy beneath. Fruits globose. Belghar, Balliguda, Beheda; also observed throughout both the districts. *Sharma* 2441, 2850 & 3068, *Narayanappa* 2240. (A3 D3)

VITACEAE

Ampelocissus latifolia (Roxb.) Planch.

Tendrillar climber. Leaves palmately - lobed or angled, glabrous. Flowers deep brown-red, in panicled cymes. Kotagarh. *Sharma* 3092. (A2 D2)

Ampelecissus tomentosa (Heyne ex Roth) Planch

Tendrillar climber Leaves palmately - lobed or angled,tomentose. Flowers red. Balliguda, Hathigam. *Sharma* 2993, *Narayanappa* 2347. (A2 D2)

Cayratia trifolia (Linn.) Domin

[*C.carnosa* (Lamk.) Gagnep.]

Tendrillar climber in flower buds. Leaves 3-foliolate. Kotagrah; also observed in Bonda hills. *Sharma* 3100. (A2 D2)

Cissus quadrangularis Linn.

S : Asthisamhara. V Hadasinkuda

Tendrillar climber. Branches 4-angled, fleshy. Leaves 3-lobed. Found in vegetative condition. Rayagada. Hemadri 3928; also in Phulbani district (A2 D2)

LEEACEAE

Leea edgeworthii Sant.

(*L.aspera* Edgew.)

Undershrub in flowering & fruiting. Kurtumgarh (near Balliguda). *Sharma* 3064.(A2 D3)

Leea indica (Burm.f.)Merr.

(*L.sambucina* Willd.)

Erect shrub. Leaves bipinnately compound. Found in vegetative condition, in both the districts. (A2 D2)

SAPINDACEAE

Cardiospermum halicacabum Linn.

S : Satakratulata

Annual, twining herb. Fruit inflated, 3-angled. Seeds black with white hilum. Found in both the districts, in drying condition during May-June. (A3 D3)

Litchi chinensis Sonner.

[*Nephelium litchi* (Lour.) Camb.]

V : Lichi

Small tree with paripinnate leaves. Cultivated. Kalinga. *Narayanappa* 2129.

Sapindus emarginatus Vahl

S : Arishtaka. V Ritha

Small tree in fruiting Fruit 3-lobed. Found in Chandrapur, also in Phulbani district.(A2 D3)

Schleichera oleosa (Lour.) Oken

S : Kosamra. V : Kosum, Kusum, Kusumo

Tree in fruiting Fruits ovoid, sour in taste. Seeds oil yielding. Dudhbeda (near Metpad); also observed in Phulbani district. *Hemadri* 3881. (A3 D3)

ANACARDIACEAE

Anacardium occidentale Linn.

S : Kajutaka. V : Lonkabhalya

Small tree in fruiting. Cultivated for its nut in both the districts. Also planted by Forest Department

Buchanania lanzan Spreng.

S : Priyala. V : Charo, Charkoli, Chanhra

Small tree in vegetative condition or bearing flower buds. Leaf broadly oblong. Belghar, Kalinga, also observed throughout the forests in both the districts. *Sharma* 2428, *Narayanappa* 2135.(A2 D3)

Lannea coromandelica (Houtt) Merr.

S : Jingini V . Mohi, Moyi, Mudai

Tree in fruiting. Leaves compound. Moyi gum is tapped from the trunk Balliguda; also observed in Koraput district. *Sharma* 2839. (A3 D3)

Mangifera indica Linn.

S . Amra. V : Aam, Amba, Maavudi (Telugu), Pidia mraanu (Kutiya Dialect)

Tree in fruiting Fruits ovoid, 5-7 cm long. Found mostly in wild condition, in both the districts. (A3 D3)

Semecarpus anacardium Linn.f.

S : Bhallataka. V . Bhalya, Bonebhalia, Bhallia.

Small tree Flowers in terminal panicles. Bonda hills, Balliguda, Kurtumgarh (near Balliguda). *Hemadri* 3852, *Sharma* 2536 & 3004. (A2 D3)

Spondias pinnata (Linn f.) Kurz

(*S. mangifera* Willd)

S : Amrataka. V : Ambaada

Tree in vegetative condition or in fruiting. Found in both the districts. (A1 D2)

MORINGACEAE

Moringa oleifera Lamk.

S : Shigru V · Munago gatch, Muninga, Muniya

Small tree. Leaves decompound. Flowers white. Fruits elongate. Seeds 3-winged. Planted in both the districts for its vegetable fruit.

FABACEAE

Abrus precatorius Linn.

S : Gunja. V : Runjo; Guriginja (Telugu)

Perennial climber in vegetative condition. Muniguda, also in Phulbani district. (A2 D3)

Aeschynomene indica Linn.

Erect herb in flowering & fruiting Hathigam, *Narayanappa* 2361 (A2 D2)

Atylosia scarabaeoides (Linn.) Benth

Climber. Leaves trifoliolate. Fruits 3-5 jointed, flat, densely hairy. Barakhambha forest (near Balliguda), Kalinga; also observed near Rayagada. *Sharma* 3168, *Narayanappa* 2253. (A3 D3)

Atylosia volubilis (Bl) Gamble

V : Ban-simi

Climber Flowers yellow Belghar. *Sharma* 2402. (A2 D2)

Butea monosperma (Lamk.) Taub

S : Palasha. V : Polosa

Small tree. Leaves trifoliolate. Fruits broad & somewhat oblong. Kalimela-Podia; also observed in Phulbani district. *Hemadri* 3817. (A3 D3)

Butea parviflora Roxb.

(*Spatholobus roxburghii* Benth.)

Large climber with pinnately 3-foliolate leaves. Flowers cream coloured. Pods tomentose. Kotagarh, Balliguda. *Sharma* 2528 & 3135. (A2 D2)

Butea superba Roxb.

S : Lata palasha. V : Boddilimalo, Gandha palasa

Perennial, woody climber. Leaves 3-foliolate. Found in vegetative condition in both the districts.(A2 D2)

Cajanus cajan (Linn.) Millsp.

S : Adhaki. V : Kandul (Telugu); Arhar

The 'Red-gram', cultivated in both the districts for its edidle seeds.

Cicer arietinum Linn.

S : Chanaka. V : Chona

The 'Bengal-gram', cultivated for its edible seed, in both the districts.

Clitoria ternatea Linn

S : Aparajita

Perennial climber. Flowers bluish or greenish-white Planted in gardens Dabugam; also

observed in Phulbani district. *Narayanappa* 2384.

Crotalaria alata Buch.-Ham. ex Roxb

V : Jhumka

Sub-erect herb Stem winged. Flowers yellow. Balliguda, Hathigam.*sharma* 2996, *Narayanappa* 2362. (A2 D2)

Crotalaria albida Heyne ex Roth

V : Jhumka, Jhunjhuni

Herb. Flowers yellow. Jhiripani, Hathigam. *Sharma* 2459, *Narayanappa* 2363. (A2 D2)

Crotalaria calycina Schrank

V : Jhumka

Herb with appressed brown - hairy branches. Leaves linear or lanceolate. Calyx with long brown hairs. Balliguda, on way from Belghar to Jhiripani, Hathigam. *Sharma* 2481,3005 & 3126, *Narayanappa* 2328. (A2 D2)

Crotalaria epunctata Dalz.

Erect, profusely branched herb. Leaves 1-foliolate, oblong. Flowers yellow in racemes. Pods inflated. Found in the forest undergrowth, in both districts (A2 D2)

Crotalaria juncea Linn.

S : Shana. V : Shano

Erect shrub in fruiting. Stem & branches grooved. Leaves linear or linear - oblong. Cultivated. Dabugam; also observed in Phulbani district. *Narayanappa* 2379.

Crotalaria pallida Ait

V : Gulguli; Gulagitcha (Telugu)

Erect perennial shrub, profusely branched. Leaves trifoliolate. Flowers yellow. Pod oblong, inflated, glabrous, many seeded. Umerkote. *Hemadri* 3900 (A2 D3)

Crotalaria prostrata Rottl ex Willd.

V : Samjhumka

Prostrate herb. Leaves 1-foliolate. Flowers yellow. Pods inflated. Kurtumgarh, Barakhambha forest (near Balliguda); also observed in Koraput district. *Sharma* 2544, 3037 & 3162. (A2 D3)

Crotalaria spectabilis Roth

V : Jhunjhunia, Jhumka

Herb. Flowers yellow Belghar, Kurtumgarh (near Balliguda) *Sharma* 2416 & 2541. (A2 D2)

Dalbergia lanceolaria Linn.f

Small tree. Flowers white. Daringbadi *Sharma* 2971. (A2 D2)

Dalbergia latifolia Roxb

V : Sissu, Sissuva

Small tree in vegetative condition. Leaflets orbicular, retuse. Few, found in both the districts. (A2 D2)

Dalbergia paniculata Roxb.

V : Dhobni, Satporliya

Tall tree in vegetative condition Found in both the districts. (A2 D3)

Dalbergia sissoo Roxb.

S : Simsapa. V . Sissu, Sissuva

Small tree. Leaflets orbicular, acuminate. Fruits flat, winged. Planted.Muniguda. *Hemadri* 3929.

Dalbergia volubilis Roxb

Woody climber in fruiting. Fruits flat, winged. Few found in Chitrakonda; also in Phulbani district. (A2 D2)

Desmodium gangeticum (Linn.) DC.

S : Salaparni. V : Chokkosondo, Salaparni

Herb or undershrub Flowers bluish purple. Fruits flat, jointed. Kotagarh, Kalinga, Hathigam; also observed in Chitrakonda. *Sharma* 2515. *Narayanappa* 2228 & 2343. (A2 D3)

Desmodium heterocarpon (Linn.) DC.

(*D.polycarpum* DC.)

V : Mohini

Undershrub or shrub in fruiting Beheda. *Narayanappa* 2239. (A2 D3)

Desmodium motorium (Houtt.) Merr.

[*D.gyrans* (Linn.f) DC.]

Erect herb in fruiting. Leaves usually trifoliolate, lateral ones very small. terminal one oblong or oblong-lanceolate. Beheda. *Narayanappa* 2272. (A2 D2)

Desmodium pulchellum (Linn.) Benth.

V : Salaparni

Undershrub in fruiting. Common in Sal forests. Jhiripani, Kalinga, Beheda *Sharma* 2456, *Narayanappa* 2148 & 2244. (A3 D3)

Desmodium triflorum (Linn.) DC.

V : Kansisna

Prostrate herb. Leaves 3-foliolate. Flowers reddish. Fruits flat, jointed. Kalimela, Balliguda; also observed in other localities of both the districts. *Hemadri* 3825, *Sharma* 3150. (A2 D3)

Desmodium velutinum (Willd.) DC.

(*D.latifolium* DC.)

V : Salparni, Salpani

Herb or undershrub Fruits flat, jointed. Balliguda, Jhiripani, Beheda. *Sharma* 2466 & 3129, *Narayanappa* 2291. (A2 D3)

Dolichos biflorus Linn.

S : Kulatha. V : Kulatha

The 'Horse gram', it is cultivated in both the districts for its seed.

Dolichos lab-lab Linn.

S : Shimbi. V : Semi, Chikkudu (Telugu)

Cultivated for its edible pods and seeds, in both the districts

Eriosema himalaicum Ohasi

(E. chinensis Vogel)

Erect herb or undershrub with hairy branches. Leaf one-foliolate, linear, silky beneath. Pod clothed with long brown hairs. Barakhambha forest (near Balliguda). *Sharma* 3172. (A2 D2)

Erythrina indica Lamk.

S : Paribhadra. V. Paldwa, Chaavuldwa

Small tree in vegetative condition or in fruiting. Fruit moniliform. Planted in Ramgiri-Metpad area, also in Phulbani district

Flemingia chappar Ham.

V : Rani

Erect shrub. Leaves orbicular - ovate, cordate, cuspidate. Cymes enclosed in large folded bracts. Common in Sal forests Kotagarh. *Sharma* 2501 (A3 D3)

Flemingia nana Roxb.

[*Moghania nana* (Roxb) Mukherjee]

V : Jikidi Kanda

Stunted perennial, *woody herb in vegetative condition or in flowering. Few, found in the* forest undergrowth about Umerkote. *Hemadri* 3642 (A2 D2)

Flemingia paniculata Wall.

Erect shrub. Flowers pale-white. Kurtumgarh (near Balliguda). *Sharma* 2547. (A2 D2)

Flemingia strobilifera (Linn.) R. Br.

V : Salparni

Erect herb or undershrub. Recemes with folded cordate bracts. Frequent in Sal forests. Kurtumgarh (near Balliguda). *Sharma* 2539. (A3 D3)

Goniogyna hirta (Willd.) Ali

Small, prostrate herb. Leaves 1-foliolate. Flowers yellow Fruit flat, somewhat inflated. Few, found about Umerkote. (A2 D2)

Indigofera cassioides Rottl. ex DC.

(I. pulchella Roxb.)

V: Gerli, Girel

Erect shrub with profuse branches. Leaves pinnate. Flowers pink. Jhiripani, Kalinga; also observed in Koraput district. *Sharma* 2462, *Narayanappa* 2159. (A2 D3)

Indigofera glandulosa Roxb. ex Willd.

Erect herb. Leaves 3-foliolate. Found in flowering. Frequent in grassland. Kotagarh. *Sharma* 3096. (A2 D3)

Indigofera hirsuta Linn.

V : Ban Kaddi

Hairy herb in fruiting. Beheda. *Narayanappa* 2303 (A2 D2)

Indigofera linifolia (Linn. f.) Retz

Erect or diffuse herb. Leaves one-foliolate. Flowers pink. Barakhambha forest (near Balliguda), also observed near Umerkote. *Sharma* 3163 (A2 D3)

Indigofera linnaei Ali

(*I. enneaphylla* non Linn)

Prostrate, perennial herb. Leaves pinnate. Flowers pink Boudh; also observed throughout both the districts *Hemadri* 3963 (A2 D3)

Indigofera tinctoria Linn.

S : Nilika

Woody herb. Leaves pinnate. Fruits elongate, in dense racemes. Boudh. *Hemadri* 3961. (A2 D2)

Milletia extensa Benth.

(*M. auriculata* Baker ex Brandis)

V : Kateru malo, Majjo, Makdi

Perennial woody climber. Flowers greenish-white in axillary racemes Bonda hills, Belghar, Kurtumgarh (near Balliguda). *Hemadri* 3857, *Sharma* 2437 & 3056. (A2 D3)

Milletia racemosa Benth.

V : Kesimala

Woody climber in flowering. Daringbadi. *Sharma* 2962 & 2979. (A1 D2)

Mucuna pruriens (Linn.) DC.

(*M. prurita* Hook.)

S : Kapikatchu, Atmagupta. V : Baidok; Duladaama (Telugu)

Climber in vegetative condition. About Rayagada; also found in Phulbani district. (A2 D3)

Ougeinia oojeinensis (Roxb) Hochr.

S : Tinisa V : Bandan, Bandano

Small tree. Leaves 3-foliolate, leaflets waxy. Found in vegetative condition. Gumma - Kumbikota (near Rayagda); also observed in Phulbani district. *Hemadri* 3917.(A2 D2)

Phaseolus radiatus Linn.

S : Mudga. V · Mugo

The 'Green gram', it is cultivated in both the districts for its seed.

Pongamia pinnata (Linn.) Pierre

[*Derris indica* (Lamk.) Bennett]

S : Karanja. V : Koranja

Small tree. Flowers purplish-white. Fruits flat. Kalinga; also observed in Koraput district. *Narayanappa* 2166. (A2 D2)

Pseudarthria viscida (Linn.) Wt. et Arn.

Undershrub. Leaves 3-foliolate. Found in both the districts in dried fruits. (A2 D2)

Pterocarpus marsupium Roxb.

S : Bijaka. V : Bijja; Vengisi (Telugu)

Tree in flowering. Common. Beheda; also observed in most of the forest localities in Phulbani district *Narayanappa 2281 (A3 D3)*

Pueraria tuberosa (Roxb. ex Willd) DC

S : Vidari V . Bhuikopal, Bhuikokar, Patal kumda

Large climber. Root often enormously bulging into subglobose tubers. Leaves 3- foliolate, grey-hairy beneath. Gumma - Kumbikota (near Rayagada), Daringbadi. *Hemadri* 3918, *Sharma* 2928. (A2 D3)

Rhynchosia minima (Linn) DC

V : Mraalu vudathpani

Weak climber in vegetative condition. Few, found near Ladda-Rayagada. (A2 D2)

Sesbania bispinosa (Jacq.) Fawcett et Rendle

(*S. aculeata* Pers.)

Erect, woody annual. Stem prickly. Fruits linear in dried condition. Few, found in both the districts. (A2 D2)

Smithia conferta Sm.

S : Lakshmana?

Woody annual herb in fruiting Found dried in moist situations about Umerkote. *Hemadri* 3041. (A2 D2)

Tephrosia candida (Roxb.) DC.

V : Ghirdi

Shrub in vegetative condition. *Sharma* 2910 (A1 D1)

Tephrosia purpurea (Linn.) Pers.

S . Sharapunkha V : Kulthia ponhra; Vempali (Telugu)

Woody herb. Flowers pink or purplish. Fruits flat, linear. Ladda (near Rayagada) , Balliguda. *Hemadri* 3914, *Sharma* 3033. (A3 D3)

Teramnus labialis (Linn. f.) Spreng.

S : Mashaparni. V : Aakkimonje

Weak Climber. Fruits linear with a bend at the beaked apex. Few, found in both the districts. (A2 D2)

Teramnus labialis (Linn.f) Spreng. var. ***mollis*** Baker

V : Ban-Kultha

Weak climber. Fruits linear. Kotagarh. *Sharma* 2520. (A1 D2)

Uraria lagopodioides Merr.

(*Uraria alopecuroides* Wt.)

Woody herb. Flowers pink. Found in Sal forests.Umerkote, Balliguda. *Sharma* 2989. (A2 D3)

Uraria picta Desv.

S : Prisniparni

Woody herb. Flowers pink. Simanbadi (near Daringbadi), Beheda, Hathigam. *Sharma* 2943, *Narayanappa* 2256 & 2359. (A1 D2)

Zornia diphylla Pers.

Small herb. Flowers yellow. Balliguda, Hathigam. *Sharma* 3187, *Narayanappa* 2335. (A2 D2)

CAESALPINIACEAE

Bauhinia purpurea Linn.

S : Kovidara,Vanaraja. V . Borodo

Small tree in vegetative condition. Gurupoda - Phirangia (near Phulbani); also observed in Koraput district. *Hemadri* 3943.(A2 D2)

Bauhinia racemosa Lamk.

V : Dondra, Konchana

Small tree. Flowers small, white. Fruits flat, elongate. Found in both the districts. Hathigam, Balliguda. *Narayanappa* 2327, *Sharma* 2841. (A2 D3)

Bauhinia roxburghiana Voigt

(*B. retusa* Ham. ex Roxb.)

V : Amti, Dondar, Dondara, Dondarimarani, Behada, Kachan

Small tree in fruiting. Leaf sour in taste. Dudhbheda (near Metpad), Belghar, Balliguda, Hathigam. *Hemadri* 3883, *Sharma* 2439 & 3034, *Narayanappa* 2358. (A2 D2)

Bauhinia vahlii Wt. et Arn.

V : Siali

Large woody climber. Leaves large, bi-lobed. Flowers white. Fruits flat. Nuagam, Budaguda forest (near Balliguda), Belghar, Kalinga. *Sharma* 2438, 2873 & 3078. *Narayanappa* 2154. (A3 D3)

Bauhinia variegata Linn.

S : Kanchanara. V : Kachan

Small tree. Flowers white or purple with usually one petal variegated. Belghar, Jhiripani, Kalinga. *Sharma* 2433 & 2473, *Narayanappa* 2205 & 2214. (A2 D2)

Cassia absus Linn.

Herb in fruiting. Balliguda. *Sharma* 3019. (A2 D2)

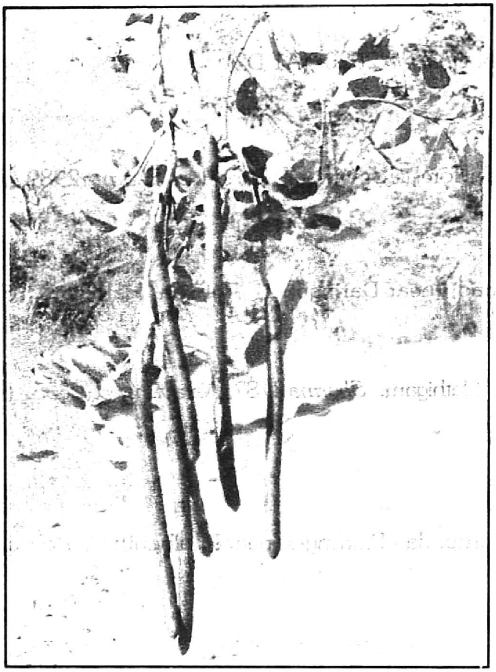


Fig. No. 21
Cassia fistula
Fruit pulp heals up boils

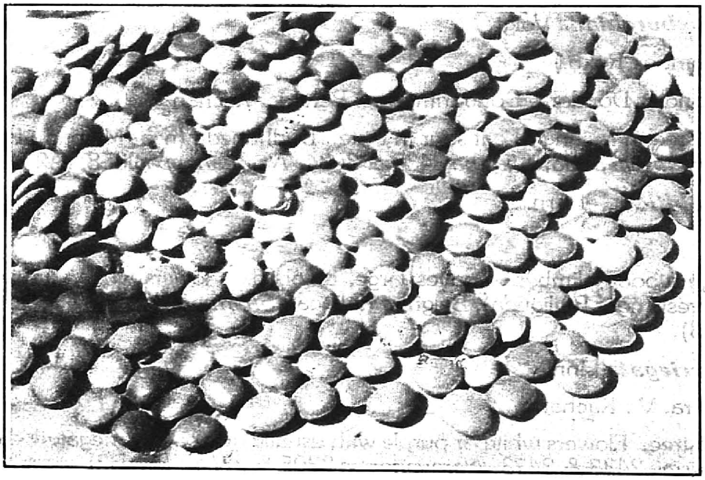


Fig. No. 22
Entada pursaetha :
Seeds, a source of antifertility drug

Cassia auriculata Linn.

S : Avarthanki. V : Tangedu (Telugu)

Perennial shrub. Stipules auricled. Flowers yellow. Fruits flat, elongate. Frequently found in both the districts. (A3 D3)

Cassia fistula Linn.

S : Aragvadha. V : Sonari, Sonarli

Small tree. Flowers yellow in attractive bunches. Fruit cylindrical, long. Karka (near Umerkote), Kotagarh, Balliguda *Hemadri* 3895, *Sharma* 2512 & 2840.(A3 D3)

Cassia hirsuta Linn.

V : Bada chakunda

Tall herb - shrub in fruiting. Dabugam. *Narayanappa* 2376. Also about Gurupriyo river of Chitrakonda. (A2 D2)

Cassia obtusifolia Linn.

S : Chakramarda V : Chakunda

Erect herb. Leaves with one gland. Flowers yellow. Common along the road side and in waste places. Phulbani-Kalinga, Nuagam (near Balliguda), Daringbadi, Beheda. *Hemadri* 3970, *Sharma* 2924 & 3086, *Narayanappa* 2242. (A3 D3)

Cassia occidentalis Linn.

S : Kasamarda V : Bada Chakunda

Erect woody herb. Flowers yellow. Fruits elongate. Daringbadi, Balliguda; also observed around Rayagada. *Sharma* 2925 & 3197. (A2 D3)

Cassia pumila Lamk

Diffuse or prostrate herb. Flowers yellow. Balliguda. *Sharma* 3143. (A2 D2)

Cassia siamea Lamk.

Moderate sized tree in flowering. Planted on road side. Kalinga. *Narayanappa* 2220.

Cassia tora Linn.

S : Chakramarda. V : Chakunda

Erect herb. Leaf with 2 glands. Flowers yellow. Fruit cylindrical, elongate. A common weed along road-side in both the districts. (A3 D4)

Delonix regia (Boj.) Raf.

V : Krishnochuda

Small tree in vegetative condition or in flowering (May). The 'African Flame of the Forest', it is grown in gardens of both the districts.

Peltophorum pterocarpum (DC.) Backer ex K. Heyne

[*P. ferrugineum* (Decne.) Benth.]

Tree with yellow flowers and flat fruits. Native of Tropical Asia & Australia, it is planted in gardens of both the districts.

Tamarindus indica Linn.

S : Chincha. V : Ithmara, Thenthuli gatch

Tree in vegetative condition or in fruiting (May). Found in both the districts. (A3 D3)

MIMOSACEAE

Acacia auriculiformis A. Cunn.ex Benth.

Small tree with falcate phyllode (modified petiole). A native of North Australia and Queen's Land; planted in both the districts under afforestation schemes.

Acacia chundra Willd.

S : Khadirabheda. V : Chandra (Telugu)

Small tree, prickly all over Flowers in spikes. Frequently found in both the districts (A3 D3).

Acacia leucophloea (Roxb.) Willd.

S : Arimeda. V : Gohira, Goharia, Gondho

Tree in vegetative condition. Trunk whitish. Branches spiny. Found in both the districts. (A3 D3)

Acacia nilotica (Linn.) Willd. ssp. ***indica*** (Benth.) Brenan

S : Babbula. V : Bamur

Small tree. Trunk black. Branches spiny. Flowers yellow in globose heads. Fruits moniliform. Common in both the districts. (A3 D3)

Acacia pennata (Linn.) Willd.

Large, straggling, prickly shrub. Flowers pale-yellow. Kotagarh, Balliguda. *Sharma* 2526 & 3182. (A2 D2)

Acacia sinuata (Lour.) Merr.

[*A. concinna* (Willd.) DC.]

S : Saptala. V : Chilli

Straggling, prickly, climbing shrub. Leaves sour in taste. Found in vegetative condition with auricled stipules. Gumma-Kumbikota (near Rayagada). *Hemadri* 3920. (A2 D2)

Acacia torta (Roxb.) Craib

V : Chilmal, Bona Chilli, Sikari Kanta

Large, straggling, prickly shrub. Flowers white or yellowish. Belghar, Budaguda forest (near Balliguda), Daringbadi, Kalinga-G.Udaigiri; also observed in Koraput district. *Sharma* 2424, 2876 & 2977, *Hemadri* 3976. (A3 D3)

Albizia chinensis (Osbeck) Merr.

(*A. stipulata* Boivin)

V : Bharanga, Godalanjia

Tree. Leaves bipinnate, stipules leafy. Flowers greenish yellow, filaments white with greenish tips. Wood is used for construction of boats. Metpad, Simanbadi (near Daringbadi). *Hemadri* 3886, *Sharma* 2942 (A2 D2)

Albizia lebbeck (Linn.) Benth.

S : Sirisha. V : Siris

Tree. Leaves bipinnate. Flowers with emerald green filaments. Fruits flat, oblong. Boudh, Dabugam. *Hemadri* 3969, *Narayanappa* 2390. (A2 D2)

Albizia odoratissima Benth.

Tree. Leaves bipinnately compound. Frequently found in vegetative condition in both the districts. (A3 D3)

Dichrostachys cinerea (Linn.) Wt. et Arn.

S : Virataru. V : Velturu (Telugu)

Large shrub or small tree. Twigs thorny. Flowers in spikes, lower ones pink uppermost yellow. Fruits flat, twisted. Manyamkonda (near Kalimela). *Hemadri* 3822. (A2 D3)

Entada pursaetha DC.

Woody, tendrillar climber. Pods about 60 cm long, jointed. Seeds very hard, reddish brown. Few, found in both the districts climbling on tall trees (A2 D2)

Leucaena leucocephala (Lamk.) de Wit

V : Kubabul

Large shrub or small tree. Flowers in white, globose heads. Fruits flat, strap like. A native of Tropical America; planted about Muniguda; also in Phulbani district.

Mimosa himalayana Gamble

Prickly shrub. Flowers pink. Kotagarh. *Sharma* 3108. (A2 D2)

Mimosa pudica Linn.

S : Lajjalu. V : Lajkudi

Perennial woody herb spreading on the ground with ascending branches, prickly all over. Leaves sensitive. Flowers pink. Fruits prickly. Common in waste places. Balliguda, Dabugam, Podia-Sonki. *Sharma* 2999, *Narayanappa* 2385. (A3 D3)

Pithecellobium dulce (Roxb.) Benth.

Tree. Flowers greenish-white. Fruits twisted. Seeds black with white-red tinged edible aril. Native of Tropical America; planted in both the districts.

Prosopis juliflora (Sw.) DC.

Large shrub or small tree with scandent, prickly branches, fruits cylindrical, elongate. Native of Tropical & Sub-Tropical America; planted as hedge & fuel plant in both the districts.

Samanea saman (Jacq.) Merr.

[*Pithecellobium saman* (Jacq.) Benth.]

V : Nitravathi

The 'Rain Tree', it is a native of Tropical America, planted along the avenues in both the districts.

Xylia xylocarpa (Roxb.) Taub.

V : Tangni

Tree. Pods flat & woody. Kotagarh; also observed around Gupteshwar - Metpad. *Sharma* 2506. (A3 D3)

CRASSULACEAE

Bryophyllum pinnatum (Lamk.) Oken

S : Patrabija. V : Basam gatch (Bonda dialect).

Perennial undershrub. Leaves thick 1-3 foliolate with notched margins. Few, found in vegetative condition in Bonda hill forest. (A2 D2)

COMBRETACEAE

Anogeissus acuminata (Roxb. ex DC.) Guill. et Perr.

V : Phansi; Paachi Chettu (Telugu)

Tree in fruiting. Leaves small with acute apex. Balliguda; also observed near Muniguda. *Sharma* 2858. (A2 D3)

Anogeissus latifolia (Roxb. ex DC.) Wall ex Guill. et Perr.

S : Dhava. V : Dhaura, Dhevu, Dhavada, Dhau

Tree. Flowers small, greenish Kotagarh, Nuagam (near Balliguda), Kalinga, Beheda. *Sharma* 2503 & 3074, *Narayanappa* 2138 & 2237. (A3 D3)

Calycopteris floribunda Lamk.

S : Sweta dhataki ? V : Khorkhori, Rasselmal

Large, straggling shrub. Leaves densely hairy. Found in vegetative condition. In Bonda hill forests; also in Phulbani district. (A3 D4)

Combretum ovalifolium Roxb.

V : Yada teega (Telugu)

Large, straggling and climbing shrub in flowering and fruiting. Few, found in both the districts. (A2 D2)

Combretum roxburghii Spreng.

(*C. decandrum* Roxb.)

V : Keuti

Climbing shrub. Flowers pale-yellow or whitish. Belghar, Hathigam. *Sharma* 2421, *Narayanappa* 2378. (A3 D3).

Quisqualis indica Linn.

Straggling shrub. Flowers rose-red with long tubes. Grown in gardens of both the districts.

Terminalia alata Heyne ex Roth

[*T. tomentosa* (Roxb. ex DC.) Wt. & Arn.]

V : Saj, Asana, Sahaj, Kola Sahaj, Panda Sajo

Tree. Leaves densely tomentose. Fruits winged. Kotagarh, Daringbadi, Balliguda, Beheda, Hathigam. *Sharma* 2523, 2905, 3020, *Narayanappa* 2308 & 2377. (A3 D4)

Terminalia arjuna (Roxb. ex DC.) Wt. et Arn.

S : Arjuna. V : Arjuna, Panisaj

Tree with whitish trunk. Leaves oblong. Fruits winged. Kutraguda (near Muniguda), Kalinga; also observed throughout both the districts. *Hemadri* 3930, *Narayanappa* 2167. (A2 D3)

Terminalia bellirica (Breyn ex Gaertn.) Roxb.

S : Bibhitaka. V : Beheda, Billa, Tandi gatcho, Barda

Tree. Leaves obovate. Fruits brownish. Ladda (near Rayagada), Nuagam (near Balliguda) *Hemadri* 3910, *Sharma* 3070. (A3 D3)

Terminalia catappa Linn.

S : Grahadruma. V : Badam chettu (Telugu)

Tree. Often grown in gardens. Kernel edible. Found in both the districts.

Terminalia chebula Retz.

S: Haritaki. V : Harda

Tree in fruiting. Chandrapur (near Muniguda), Kotagarh, Balliguda, Nuagam, Beheda. *Hemadri* 3939, *Sharma* 2518, 2855 & 3085, *Narayanappa* 2236. (A2 D3)

MYRTACEAE

Callistemon linearis DC.

Large shrub or small tree in fruiting. Leaves lanceolate. Planted. Horticultural Research Station, G. Udaigiri. *Hemadri* 3980.

Eucalyptus spp.

V : Nilgiri

Plantations of various species are found in both the districts. The common one is *E. tereticornis* Sm. with ovate-lanceolate and linear-lanceolate leaves.

Psidium guajava Linn.

S : Bahubija. V . Jambo

Small tree, grown in gardens for its edible fruit. Found in both the districts.

Syzygium cumini (Linn.) Skeels

S: Jambu. V : Jambo, Jamkoli

Tree. Flowers white. Fruits oblong, black when ripe with purple flesh. Gurupoda (near Phulbani), Sarangada, Kalinga; also observed in Koraput district. *Hemadri* 3947, *Sharma* 2885, *Narayanappa* 2162. (A2 D3)

Syzygium heyneanum (Duthie) Wall. ex Gamble

V : Jamkoli

Shrub. Flowers white. Found along rivers & nalas. Balliguda. *Sharma* 2860. (A2 D3)

Syzygium operculata (Roxb.) Gamble var. ***obovata*** (Duthie) Gamble

V : Poigam, Kutni Jambu

Tree. Leaves orbicular-obovate. Flowers greenish-white. Budaguda forest (near Balliguda); also found about Metpad. *Sharma* 2878. (A2 D2)

BARRINGTONIACEAE

Barringtonia acutangula (Linn.) Gaertn.

S : Nicula. V : Dimbari, Hinjal

Small tree. Flowers in hanging racemes. corolla bright-red. Along Kolab (Sabari) river, Gupteshwar, Balliguda (along river). *Hemadri* 3869, *Sharma* 3191. (A2 D2)

LECYTHIDACEAE

Careya arborea Roxb.

S : Kumbhi. V : Kumbhi, Kumbi, Kummi, Kumbh

Small or medium sized tree. Leaves large, obovate or obovate-oblong, usually clustered at the ends of the branchlets. Fruits globose or obovoid. Budaguda forest (near Balliguda), Kalinga; also observed in Koraput district near Metpad. *Sharma* 2881, *Narayanappa* 2133. (A2 D3)

MELASTOMATACEAE

Melastoma malabathricum Linn.

V : Bono gulabi

Erect herb upto 1 1/2 m high, in vegetative condition. Few, found in Bonda hill forests; also about Phulbani. (A2 D2)

LYTHRACEAE

Ammannia baccifera Linn.

Herb in flowering & fruiting. Found in wet places and paddy fields. Jhiripani, Kotagarh. *Sharma* 2460 & 24 91. (A3 D3)

Ammannia multiflora Roxb.

Erect, small herb in fruiting. Kotagarh. *Sharma* 2490. (A2 D2)

Lagerstroemia parviflora Roxb.

V : Sidha

Small tree. Leaves ashy beneath. Flowers white. Kurtumgarh, Balliguda, Nuagam, Beheda. *Sharma* 2535, 2846 & 3069, *Narayanaappa* 2307. (A3 D3)

Lawsonia inermis Linn.

S : Madayanti. V : Monjathi

Large shrub or small tree. Planted for its dye-yielding leaf with medicinal properties. Found in both the districts.

Woodfordia fruticosa (Linn.) Kurz

S : Dhataki. V : Dhaiti

Profusely branching shrub. Flowers red. Karka near Umerkote, Kotagarh, Kalinga. *Hemadri* 3896, *Sharma* 2530, *Narayanappa* 2161. (A3 D3)

PUNICACEAE

Punica granatum Linn.

S : Dadima. V : Dalimba

Planted in gardens for its fruit. Found in flowers and fruits in both the districts.

ONAGRACEAE

Ludwigia octovalvis N. Jacq.

(*Jussiaea suffruticosa* Linn.)

Herb in fruiting. Found in wet & marshy places. Kotagarh. *Sharma* 2492. (A2 D2)

Ludwigia perennis Linn.

(*L. parviflora* Roxb.)

Erect herb. Flowers yellow. Found in wet & marshy places. Balliguda. *Sharma* 3156. (A2 D2)

CARICACEAE

Carica pappaya Linn.

S : Yeranda Karkati. V : Amrita anda, Amritobonda

Small, soft-stemmed tree, grown for its edible fruit, in both the districts.

CUCURBITACEAE

Benincasa hispida (Thunb.) Cogn.

S : Kushmanda. V : Boodida gummadi (Telugu)

Tendrillar climber, grown for its large, fleshy, ashy edible fruit. Found in both the districts.

Coccinia grandis (Linn.) Voigt

S : Bimba V : Kundru; Donda (Telugu)

Perennial, tendrillar climber. Flowers white. Fruit green, oblong, turning to red at maturity. Found wild in the road-side bush in both the districts; also cultivated. (A2 D3)

Cucumis melo Linn. var. ***agrestis*** Naud.

V : Pita Kakudi; Budama kaaya (Telugu)

Tendrillar climber. Flowers yellow. Balliguda; also observed in Koraput district. *Sharma* 3012. (A2 D2)

Cucumis sativus Linn.

S : Trapusa. V : Kakodi

Climber. Cultivated for its edible fruit. Found in both the districts.

Cucurbita maxima Duch.

V : Kumda

Tendrillar climber. Cultivated for its large, edible fruit with somewhat sweet, yellowish flesh. Found in both the districts.

Diplocyclos palmatus (Linn.) Jeffrey

S : Lingini, Bahupatra

Weak, tendrillar climber in dried up condition (May). Fruits globose. Seeds bulged on both the faces resembling 'Shivlinga'. Found in both the districts. (A2 D3)

Lagenaria leucantha (Duch.) Rusby

(*L. vulgaris* Ser.)

S : Alabu. V: Burka, Tumba

Tendrillar climber. Cultivated for its edible light green, fleshy fruit with white inside. found in both the districts. The wild variety is bitter in taste. (A2 D3)

Melothria heterophylla (Lour.) Cogn.

Tendrillar climber. Flowers white or pale-yellow. Balliguda, Beheda. *Sharma* 2877 & 3196, *Narayanappa* 2312. (A2 D2)

Momordica charantia Linn.

S : Karavellaka. V: Karla, Ustha; Kakara (Telugu)

Perennial tendrillar climber. Flowers yellow. Cultivated in both the districts; found growing wild near Kalinga. *Hemadri* 3975. (A2 D3)

AIZOACEAE

Trianthema portulacastrum Linn.

S : Varsabhu. V : Luduru sag

Fleshy herb spreading on the ground. Flowers white, solitary at the base of petiole. Rayagada; also observed in Phulbani district. *Hemadri* 3924. (A3 D3)

MOLLUGINACEAE

Glinus lotoides Linn.

[*Mollugo lotoides* (Linn.) Ktze.]

Diffuse herb in fruiting. Found in river beds. Balliguda. *Sharma* 2852. (A2 D3)

Mollugo nudicaulis Lamk.

Annual herb. Leaves radical. Flowers pinkish-buff coloured in lax cymes. Found about Govindapalli. (A2 D2)

Mollugo oppositifolia (Linn.) A. DC.

V : Chetarasikoora (Telugu)

Annual herb spreading on the moist ground. Flowers greenish-white. Found in both the districts. (A2 D3)

Mollugo pentaphylla Linn.

V : Gharpudi

Herb growing in river beds. Flowers white. Balliguda; also observed about Rayagada. *Sharma* 2994. (A2 D2)

APIACEAE

Centella asiatica (Linn.) Urb.

S : Mandookaparni. V : Brahmi, Duvapothre, Durva sag, Theelkudi

Prostrate herb in wet places. Leaves orbicular, long petioled, toothed. Fruits flat, small. Pottangi, Kalinga; also observed in other localities of both the districts. *Hemadri* 2813, *Narayanappa* 2221. (A2 D3)

Eryngium foetidum Linn.

Herb. Flowers green. Rare. Daringbadi. *Sharma* 2975. A1 D1

Pimpinella wallichiana (Miq.) Gandhi

(*P. monoica* Dalz.)

Herb. Flowers white. Belghar. *Sharma* 2444. (A2 D2)

ARALIACEAE

Schefflera venulosa (Wt. et Arn.) Harms

(*Heptapleurum venulosum* Seem.)

V : Nondamal

Large climber, sometimes semi-parasitic on trees. Leaves palmately 3-8 foliolate. Flowers yellow, in umbels. Fruits globose, yellow. Metpad, Kalinga-G.Udaigiri, Balliguda. *Hemadri* 3880 & 3977, *Sharma* 2872. (A2 D3)

ALANGIACEAE

Alangium salviifolium (Linn.f.) Wang.

S : Ankola. V : Ankul, Ankulo, Dhola anko

Large shrub or small tree. Fruits globose, rose-red to purplish, sweet in taste. Seed solitary, oil yielding. Kalimela - Podia, Balliguda. *Hemadri* 3814, *Sharma* 2842. (A3 D4)

RUBIACEAE

Adina cordifolia (Roxb.) Hook.f. ex Brandis

S : Haridru. V : Haldu, Holondu

Large tree in vegetative condition or in fruiting. Common about Rayagada; also throughout Koraput & Phulbani Districts. (A3 D3)

Anthocephalus chinensis (Lamk.) Rich. ex Walp.

S : Kadamba. V : Kadamba

Tree in vegetative condition. Found about Gupteswar and Chandrapur near Muniguda; also in Phulbani district. (A2 D2)

Borreria articularis (Linn.f.) F.N.Will.

V : Sollogonti, Sologumtia

Herb with branches spreading on the ground. Flowers white. fruits greenish. Gurupriyo river bank near Chitrakonda, Balliguda. *Hemadri* 3835, *Sharma* 3032. (A3 D3)

Borreria pusilla (Wall.) DC.

[*B. stricta* (Linn.f.) Schum.]

Herb in flowering & fruiting. Flowers white. Balliguda, *Sharma* 3165. A2 D3

Canthium dicoccum (Gaertn.) Teys. & Binn. var. ***umbellatum*** (Gamble) Sant. & Merch.

Evergreen small tree in flower buds. Daringbadi; also observed in Bonda hills and about Gumma - Rayagada. *Sharma* 2932. (A2 D2)

Catunaregam spinosa (Thunb.) Tiruv.

[*Xeromphis spinosa* (Thunb.) Keay, *Randia dumetorum* (Retz) Poir.]

S : Madana. V : Solara, Patua, Madan, Bhuyiranga, gadyagatcho, Petra; Thothala (Jatapu dialect)

Large shrub or small tree armed with straight, axillary thorns. Flowers white, turning yellow at length. Fruit globose or ovoid, yellow when ripe, crowned by calyx tube. Bonda hills, Kotagarh, Balliguda, Daringbadi, Hathigam *Hemadri* 3851, *Sharma* 2498, 2865, 2912 & 3123, *Narayanappa* 2341. (A3 D3)

Catunaregam uliginosa (Retz.) Sivarajan

[*Xeromphis uliginosa* (Retz.) Mahesh, *Randia uliginosa* (Retz.) DC.]

S : Gangati. V : Pindaru, Telko

Large shrub or small tree. Flowers white, pentamerous, anthers lying flat on corolla lobes. Balliguda; also observed in Koraput district. *Hemadri* 3941, *Sharma* 2871.(A2 D2)

Coffea arabica Linn.

Evergreen shrub in young, green fruits. The `Coffee', cultivated in Forest Research Garden, Kalinga. *Hemadri* 3987, *Narayanappa* 2194.

Dentella repens Forst.

Prostrate, delicate herb in moist situations. Flowers white. Fruits hairy. Found about Govindpalli and Metpad. (A2 D2)

Gardenia gummifera Linn.f.

S : Nadihingu. V : Kurlu, Kurdu, Damkurdu, Kotranga

Shrub or small tree. Twigs exuding yellow resin. Flowers white, fragrant. Fruits green. Chandrapur (near Metpad), Katrangia - Gatchapoda (near Phulbani), Balliguda, Kotagarh, Hathigam. *Hemadri* 3938 & 3957 , *Sharma* 2486, 2875 & 3094, *Narayanappa* 2331. (A2 D3)

Gardenia latifolia Ait.

S : Bharangi? V : Kurlu

Small tree often in rocky places. Leaves orbicular - obovate. Fruits globose, slightly scabrous. Thumribandha - Balliguda, Kalinga. *Sharma* 2533, *Narayanappa* 2144. (A2 D3)

Gardenia turgida Roxb.

V : Dang Kurlu, Gutu; Yelukari chittu (Telugu)

Large shrub or small tree with whitish trunk and spiny twigs. Fruits globose, grey. Daringbadi, Kotagarh; also observed in Koraput district. *Sharma* 2485 & 2933. (A2 D3)

Hedyotis auricularia Linn.

[*Exallage auricularia* (Linn.) *Bremek.*]

Prostrate herb in white flowers and green fruits. Found in Bonda hill forests (A2 D2)

Hedyotis corymbosa (Linn.) Lamk.

(*Oldenlandia corymbosa* Linn.)

Herb with linear leaves. Fruits globose, green. Balliguda. *Sharma* 3151. (A3 D3)

Hedyotis ovatifolia Cav.

(*Oldenlandia nudicaulis* Roth)

Small herb. Leaves broadly elliptic or ovate. Flowers small, white. Balliguda. *Sharma* 3166. (A2 D2)

Hymenodictyon excelsum (Roxb.) Wall.

V : Dudupa

Tree. Leaves at the ends of the branchlets, ovate to broadly elliptic. Fruits ovoid or ellipsoid. Hathigam; also observed near Gupteshwar. *Narayanappa* 2360. (A2 D2)

Ixora arborea Roxb.ex J.E. Sm.

(*I. parviflora* Vahl)

V : Guruvul, Telkirva

Small evergreen tree in vegetative condition or in fruiting. Fruits black & fleshy when ripe. Kalimela, Podia, Kalinga. *Hemadri* 3819, *Narayanappa* 2158. (A2 D3)

Ixora undulata Roxb.

Large shrub or small tree. Flowers white, fragrant. Found in cool places. Ramgiri - Gupteshwar, Daringbadi. *Hemadri* 4000, *Sharma* 2959. (A2 D2)

Knoxia mollis R. Br.

[*K. sumatrensis* (Retz.)DC.]

Erect herb in fruiting. Kurtumgarh (near Balliguda); also observed in Bonda hills. *Sharma* 2540. (A2 D3)

Knoxia roxburghii (Spreng.) Rau

Erect herb. Flowers purplish or purplish-white. Found in open grassland. Balliguda. *Sharma* 3026 & 3101. (A2 D2)

Meyna pubescens (Kurz) Robyns

(*Vangueria pubescens* Kurz)

V : Koradiyakoli, Gurbeli

Shrub or small tree often armed with long straight supra-axillary throns. Flowers small, green or greeenish-white. Balliguda, Daringbadi. *Sharma* 2909 & 3021. (A2 D3)

Mitragyna parvifolia (Roxb.) Korth.

V : Kelikadam, Kelikadombo, Mundi

Small tree. Interpetiolar stipules greenish-white. Flowers in globose heads. Balimela, Daringbadi. *Hemadri* 3845, *Sharma* 2902. (A2 D3)

Morinda coreia Buch. - Ham.

(*M. tinctoria* Roxb.)

V : Achu, Achchhu

Small tree. Flowers white. Balliguda. *Sharma* 2874 & 3038. (A2 D2)

Morinda tomentosa Heyne ex Roth

V : Sakka, Sekka (Telugu)

Small tree. Leaves tomentose. Flowers of two sizes, greenish-white. Ladda near Rayagada;also observed in Phulbani district. *Hemadri* 3909. (A3 D3)

Ophiorrhiza hirsutula Wt. ex Hook.f.

Small herb. Leaves ovate. Fruits in terminal dense cymes. Rare in forest undergrowoth. Bonda hills. *Hemadri* 3996. (A1 D2)

Paederia foetida Linn.

S : Prasarani. V : Prasarani

Slender, climbing, foetid shrub found in vegetative condition. Rare. Kurtumgarh (near Balliguda). *Sharma* 2892. (A1 D2)

Pavetta tomentosa Roxb. ex Rees

V : Dudaligatch; Papidi (Telugu)

Shrub. Leaves tomentose. Flowers white in panicled cymes. Bonda hills; also found in Phulbani district.*Hemadri* 3861. (A2 D3)

Rubia cordifolia Linn.

S : Manjistha. V : Rongo chero

Straggling perennial herb. Root orange-yellow. stem four angled, scabrid. Leaves whorled, 4 at each node, ovate, long petioled. flowers yellowish. Berries black. Found in moist damp places. Pottangi, Belghar *Hemadri* 3806, *Sharma* 2405. (A2 D2)

Spermadictyon suaveolens Roxb.

V : Gondributa, Gurakhatika

Shrub. Leaves emitting unpleasant smell on crushing. Flowers white. Bonda hills, Belghar. *Hemadri* 3862, *Sharma* 2431. (A2 D2)

Tarenna asiatica (Linn.) Alston

Evergreen shrub in vegetative condition. Young, twiggy shoots exuding yellowish resin. Found about Rayagada; also in Phulbani District. (A2 D3)

Wendlandia exserta (Roxb.) DC.

V : Tilia

Small tree, hoary or pubescent all over; in flower buds. Kurtumgarh (near Balliguda). *Sharma* 2537. (A2 D2)

Wendlandia tinctoria (Roxb.) DC.

V : Chavuli, Tillo, Tiriya, Tilia

Large shrub or small tree with dried up fruiting panicles. Ramgiri - Gupteshwar, Katrangia-Gatchapoda (near Phulbani). *Hemadri* 3967 & 3953. (A3 D3)

ASTERACEAE

Acanthospermum hispidum DC.

V : Kantagokhru

Erect, annual herb. Flowers yellowish. Achenes spiny. Found in waste places. Beheda, Kotagarh, Belghar. *Narayanappa* 2250 & 2269, *Sharma* 2450 & 3114. (A3 D3)

Ageratum conyzoides Linn.

V : Pokasunga, Kupsunga, Gondria

Erect, annual herb. Flowers in white, pink or purple heads. Common in waste places. Belghar, Dabugam; also observed throughout both the districts. *Sharma* 2452, *Narayanappa* 2381. (A3 D4)

Bidens pilosa Linn.

Erect, annual herb. Leaves simple- 3-foliolate. Heads yellow with white ray florets. Achenes linear - lanceolate with 2-3 barbellate, stiff pappus. Belghar-Jhiripani, Beheda; also observed in Bonda hills. *Sharma* 2479, *Narayanappa* 2266. (A2 D2)

Blepharispermum subsessile DC.

V : Rasnajhodi

Woody, erect herb in dried up or vegetative condition. Roots many, cylindrical, fleshy, aromatic & perennial. Found in Sal forests as undergrowth. Karka near Umerkote. *Hemadri* 3893. (A2 D2)

Blumea lacera (Burm.f.) DC.

Erect herb. Leaves obovate-oblong, hairy, achenes grey-brown. Found in waste places. Sarangada. *Sharma* 2886. (A2 D3)

Blumeopsis flava (DC.) Gagnep.

(*Laggera flava* Benth.)

Erect herb with amplexicaul, irregularly toothed leaves. Floral heads yellow. Frequent in Sal forests as undergrowth. Jhiripani. *Sharma* 2458. (A2 D3)

Caesulia axillaris Roxb.

Erect or suberect herb of wet and marshy places. Leaves linear. Fruiting heads in axillary, sessile, globose clusters. Jhiripani, Kotagarh, Beheda. *Sharma* 2464 & 2494, Narayanappa 2299. (A2 D2)

Chrysanthellum indicum DC.

Annual herb with several procumbent and spreading stems. Leaves pinnatifid. Flower heads yellow. Barakhambha forest (near Balliguda). *Sharma* 3171. (A2 D2)

Conyza canadensis (Linn.) Cronquist

(*Erigeron canadensis* Linn.)

Erect herb in flowering and fruiting. Found in Chitrakonda about Gurupriyo river. (A1 D2)

Crassocephalum crepidioides (Benth.) Moore

(*Gynura crepidioides* Benth.)

V : Ban-sarson

Erect herb. Floral heads yellow. Found in waste places. Belghar, Kalinga.Also Chitrakonda and Bonda hills. *Sharma* 2426, *Narayanappa* 2224. (A2 D3)

Dichrocephala integrifolia (Linn.) O.Ktze.

Erect, annual herb in floral heads. A weed in Pepper plantation. Pottangi, *Hemadri* 3993. (A2 D2)

Eclipta alba (Linn.) Hassk.

S : Bhringaraja. V : Sunsuniya, Bhringaraj

Erect or diffuse herb. Floral heads white. Found in wet places. Daringbadi, Balliguda; also observed in koraput district. *Sharma* 2918 & 3136. (A3 D3)

Elephantopus scaber Linn.

S : Gojihwa ? V : Mayurochandrika, Mayurachula

Erect herb in vagetative condition. Daringbadi; also observed in other localities of both the districts. *Sharma* 2921. (A3 D3)

Emilia sonchifolia (Linn.) DC. ex Wt.

V : Binj-kudo

Erect, annual herb. Floral heads pink. Belghar, Balliguda, Beheda. *Sharma* 2453 & 3010, *Narayanappa* 2283. (A2 D3)

Erigeron floribundus (H.B.K.) Sch. - Bip.

Erect herb. Floral heads yellow. Barakhambha Forest (near Balliguda. *Sharma* 3171. (A2 D2)

Eupatorium odorum Linn.

V : Gondri

Erect shrub in vegetative condition or bearing dried up floral heads. Found about Metpad and also throughout both the districts. (A4 D3)

Galinsoga parviflora Cav.

Annual herb in floral heads. Found as a weed in Pepper plantations at Pottangi. (A2 D2)

Glossogyne bidens (Retz.) Alst.

(*G. pinnatifida* DC.)

Erect, annual herb. Leaves pinnatisect. heads terminal. Achenes 2 - awned. Kalinga-G.Udaigiri, Barakhambha (near Balliguda). *Hemadri* 3979, *Sharma* 3170. (A2 D2)

Gnaphalium indicum Linn.

Annual, ashy-green herb in pale yellowish floral heads. Found in moist situations & paddy fields. Jhiripani; also observed in Koraput district. *Sharma* 2467. (A2 D2)

Grangea maderaspatana (Linn.) Poir.

Prostrate herb spreading on the ground. Floral heads yellow. Found in moist sandy places, along rivers and in harvested fields. Karka (near Umerkote), Balliguda. *Hemadri* 3895, *Sharma* 2845. (A2 D3)

Guizotia abyssinica (Linn.f.) Cass.

S : Ramtila

Annual herb with yellow heads. Cultivated for its oil-yielding achenes, in both the districts.

Gynura angulosa DC.

Herb. Floral heads orange-yellow. Balliguda. *Sharma* 3011 & 3190. (A2 D2)

Laggera pterodonta Benth.

Erect herb. Stem winged. Floral heads yellow. Found in both the districts. (A2 D3)

Parthenium hysterophorus Linn.

Erect, annual herb. Floral heads white. A weed in waste places. Daringbadi; also observed between Chitrakonda & Sileru. *Sharma* 2987. (A4 D4)

Sonchus arvensis Linn.

Erect herb. Latex yellowish. Floral heads orange-yellow. Achenes flat with white pappus. Pottangi. *Hemadri* 3807. (A1 D2)

Sonchus oleraceus Linn.

Erect herb. Floral heads yellow. Found in open grassland. Jhiripani. *Sharma* 2480.(A2 D2)

Sphaeranthus indicus Linn.

S : Mundi. V : Gondrilota

Viscous, pubescent, strongly scented herb with winged stems spreading from the root. Floral heads globose, purplish. Found in wet places and paddy fields. Jhiripani. *Sharma* 2469. (A3 D3)

Spilanthes acmella Linn.

Erect or ascending annual herb. Floral heads yellow. Kotagarh. *Sharma* 2483. (A2 D2)

Tagetes erecta Linn.

S : Jhandu. V : Mandyaphul

Erect herb grown in both the districts for its attractive floral heads.

Tridax procumbens Linn.

V : Bisalyakarni, Visalyakarani, Kottumani

Sub erect - ascending herb. Floral heads yellow on very long peduncles. A weed in waste places. Rayagada, Balliguda, Simandadi. *Hemadri* 3927, *Sharma* 2550 & 2947. (A4 D4)

Vernonia aspera Buch.- Ham.

(*V.roxburghii* Less.)

Erect herb in fruiting. Beheda. *Narayanappa* 2252

Vernonia cinerea (Linn.) Less.

S : Sahadevi. V : Pokasunga, Biranchi, Biranji

Erect herb. Floral heads pink or purplish. Jhiripani, Balliguda, Simanbadi, Beheda. *Sharma* 2475, 2944 & 2998, *Narayanappa* 2263. (A3 D3)

Vernonia divergens (Roxb.) Edgew.

Perennial shrub in vegetative condition. Found in Bonda hill forests. (A2 D2)

Vernonia teres Wall. ex DC.

V : Peg poregi

Erect herb in drying condition. Roots many, cylindrical and fleshy with perennial stock. Found in the forest undergrowth in both the districts, particularly about Umerkote and Baliguda. (A2 D2)

Vicoa indica (Linn.) DC.

Erect herb. Floral heads yellow. Found in Sal forests. Jhiripani; also observed in Koraput district. *Sharma* 2457. (A3 D3)

Volutarella divaricata Benth.

Erect diffuse herb. Floral heads pink-purple with spiny involucral bracts. Found about Gurupriyo river (Chitrakonda). (A2 D2)

Xanthium strumarium Linn.

Erect herb. Leaves scabrid or hispid. 'Fruit'covered with hooked spines. Common weed in waste places and along road side. Balliguda, Baheda. *Sharma* 3117, *Narayanappa* 2282. (A3 D3)

CAMPANULACEAE

Wahlenbergia erecta (Roth ex Roem. et Schult.) Tuyn

[*Cephalostigma erectum* (Roth ex Roem. et Schult.) Vatke]

Erect, annual herb in flowering and fruiting. Found in moist situations in Koraput district. (A2 D2)

PLUMBAGINACEAE

Plumbago rosea Linn.

S : Rakta Chitraka. V : Raktachita, Raktochitaparu, Rangochitaparu

Perennial woody herb. Roots many, cylindrical, fleshy. Petiole reddish at base. Found in vegetative condition. Jaganathpur-Ladda (near Rayagada); also observed about Panimunda & Kutraguda (near Muniguda). *Hemadri* 3904. (A2 D2)

Plumbago zeylanica Linn.

S : Chitraka. V : Chintamulo, Chitramul, Dabo chitaaparu, Dhola Chitaaparu

Perennial, woody herb, generally with profuse branches. Roots many, somewhat woody. Petiole greenish. Found in Bonda hills; also in Phulbani district. (A3 D3)

MYRSINACEAE

Ardisia solanacea (Poir.) Roxb.

V : Batguri, Putupatra, Kuntigatcho, Kuti

Erect shrub. Leaves oblong - lanceolate. Flowers pink. Fruits globose. Found along streams, nalas and in cool, damp places. Chitrakonda, Balliguda, Kurtumgarh, Sarangada, Kalinga. *Hemadri* 3831, *Sharma* 2548, 2888 & 3144, *Narayanappa* 2183. (A2 D3)

Embelia robusta Roxb.

V : Biding

Large shrub or small tree with light grey branches. Flowers greenish-white, small. Daringbadi, Nuagam (near Balliguda), Kaalinga. *Sharma* 2913 & 3076, *Narayanappa* 2146. (A2 D2)

Embelia villosa Wall.

S : Vidanga ?

Large shrub or small tree with scandent branches. Twigs & leaves rusty, sour in taste. Flower buds in recemes. Metpad. *Hemadri* 3875. (A2 D2)

SAPOTACEAE

Madhuca longifolia (Koen.) Mac Bride var. ***latifolia*** (Roxb.) Chev.

S : Madhuka. V : Mahu, Mahul, Mohuko, Movulo; Ippa, Irpimranu (Telugu)

Tree. Latex milky. Leaves broadly elliptic - lanceolate - obovate. Fruits ellipsoid with brown coating. Manyamkonda (near Kalimela), Kotagarh, Budaguda (near Balliguda), Kalinga. *Hemadri* 3820, *Sharma* 2527 & 2880, *Narayanappa* 2199. (A3 D4)

Manilkara hexandra (Roxb.) Dub.

S : Rajadana

Tree. Latex milky. Leaves oblong. Few, found in vegetative condition in both the districts. (A3 D3)

Mimusops elengi Linn.

S : Bakula

Evergreen tree. Flowers sweet - scented. Planted in gardens of both the districts.

Xantolis tomentosa (Roxb.) Raf.

(*Sideroxylon tomentosa* Roxb.)

V : Konta gatch

Small tree. Flowers pale white. Fruit broadly ovoid, seated on 5-fid calyx. Found in cool damp forest areas. Belghar, Daringbadi. *Sharma* 2443 & 2954. (A2 D3)

EBENACEAE

Diospyros chloroxylon Roxb.

Small tree in vegetative condition. Found in Koraput district. (A2 D2)

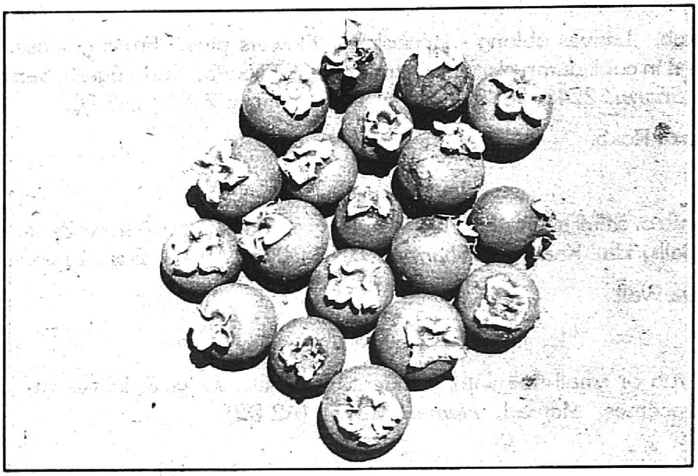


Fig. No. 23

Fruits of *Diospyros malabarica* :
The `Kupeelu' of Bhav Prakash Nighantu?

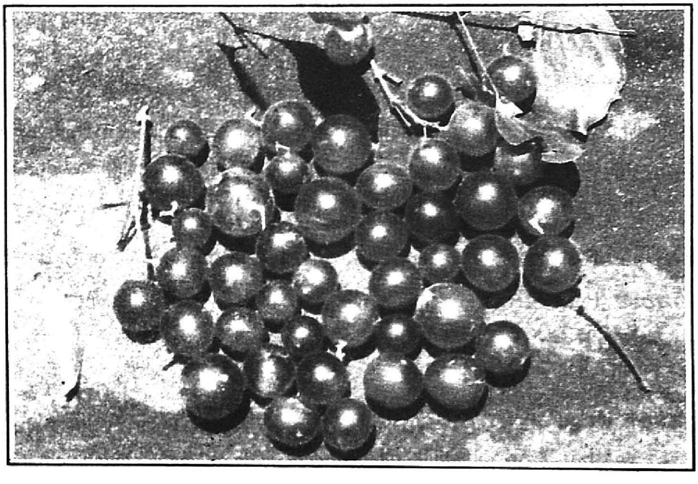


Fig. No. 24

Fruits of *Strychnos nuxvomica* : Vishamushti

Diospyros exsculpta Buch. - Ham.

(*D. tomentosa* Roxb.)

S : Tinduka. V : Kendu

Tree. Leaf leathery, ovate, tomentose. Young fruit green, globose with brown coating. Munmunda (near Boudh), Kotagarh, Daringbadi, Balliguda, Hathigam. *Hemadri* 3966, *Sharma* 2487, 2926 & 3122, *Narayanappa* 2368. (A3 D3)

Diospyros malabarica (Desr.)Kostel

[*D. peregrina* (Gaertn.) Gurke.]

V : Makad kendu

Tree. Leaves broadly oblong. Fruits globose with brown coating when young. Found along streams, nalas & rivers. Kotagarh, Kalinga; also observed in Koraput district, about Umerkote, etc. *Sharma* 2516, *Narayanappa* 2164. (A2 D2)

Diospyros montana Roxb.

V : Gonda, Sanna makadtendu

Tree, fruits sub-globose, with persistent calyx. Belghar, Kalinga; also observed in Koraput district. *Sharma* 2435, *Narayanappa* 2214. (A2 D3)

Diospyros sylvatica Roxb.

V : Makada kendu

Tree in vegetative condition. Leaves ovate. Found in Metpad forests; also in Phulbani district. (A2 D2)

OLEACEAE

Chionanthus ramiflorus Roxb.

[*Linociera macrophylla* (Bl.) Wall. ex G. Don]

Large shrub or small tree with lenticellate twigs. Leaves lanceolate, ovate- lanceolate or elliptic, glabrous. Fruits narrowly oblong. Found along streams. Kalinga. *Narayanappa* 2171. (A1 D1)

Jasminum arborescens Roxb.

V : Agumati, Ban malli

Straggling shrub. Flowers white. Fruit oblong or ellipsoid, black. Daringbadi, Kalinga. *Sharma* 2978, *Narayanappa* 2170. (A2 D2)

Jasminum roxburghianum Wall.

V : Ban-Malli

Straggling shrub. Flowers white, fragrant. Simanbadi. *Sharma* 2946. (A2 D2)

Jasminum sambac (Linn.) Ait.

S : Mallika. V : Banmalli, Malligatch, Kodina nyahalilotha (Bonda dialect)

Straggling shrub. Leaves ovate-lanceolate. Flowers white, sweet scented. Calyx lobes linear. Found in cool, shady places. Bonda hills, Daringbadi. *Hemadri* 3854, *Sharma* 2953. (A2 D2)

Schrebera swietenioides Roxb.

S : Mokshaka. V : Mokka

Tree. Capsules drooping, pyriform. Kalinga; also observed about Chandrapur. *Narayanappa* 2182. (A2 D2)

NYCTANTHACEAE

Nyctanthes arbortristis Linn.

S : parijata. V : Gangasivli

Scandent shrub or small tree. Flowers white with orange red tubes, sweet scented. Fruits orbicular, compressed. Kotagarh, Kurtumgarh (near Balliguda), Beheda. *Sharma* 2502 & 3052, *Narayanappa* 2235. (A2 D3)

APOCYNACEAE

Alstonia scholaris R. Br.

S : Saptaparna. V : Satyana, Sohojimaari, Taala mraanu, Chochina

Large tree. Latex milky. Leaves oblong, whorled. Few, found in vegetative condition in Ladda forest near Rayagada; also found in Phulbani district. (A2 D2)

Alstonia venenata R. Br.

Shrub or small tree. Latex milky. Leaves whorled, linear-lanceolate. Flowers white. Kalinga, Nuagam (near Balliguda). *Hemadri* 3989, *Sharma* 3066, *Narayanappa* 2150. (A2 D2)

Catharanthus pusillus (Murr.)G.Don

Erect annual herb. Leaves lanceolate. Flowers white,, small. Fruit a pair of linear follicles. A weed about cultivated fields, in both Koraput & Phulbani districts. (A2 D2)

Catharanthus roseus (Linn) G.Don

(*Vinca rosea* Linn.)

Erect perennial herb. Leaves elliptic. Flowers white or red. Grown in gardens. Umerkote; also observed in Phulbani district. *Hemadri* 3889.

Holarrhena antidysenterica Wall. ex A. DC.

S : Kutaja. V : Korai, Kurai, Kurmi, Kure, Kudayi, Kural, Indrajivo

Shrub or small tree. Flowers in panicled cymes, white, sweet scented. Kalimela- Podia, Jhiripani, Balliguda, Budaguda; also observed throughout the area. *Hemadri* 3816, *Sharma* 2472, 2879 & 3022. (A3 D3)

Ichnocarpus frutescens (Linn.) R.Br.

S : Krisna sariva. V : Bhotinoi

Perennial woody climber. Flowers white. Balliguda, Kurtumgarh, Kalinga; also observed in Koraput district. *Sharma* 3035 & 3063, *Narayanappa* 2198. (A2 D3)

Nerium indicum Mill.

S : Karavira. V : Ganner, Kaner, Kategulab

Large shrub. Leaves linear-lanceolate. Flowers red. Grown in gardens. Umerkote; also observed in Phulbani district. *Hemadri* 3892.

Plumeria acuminata Ait.

V : Hozariphul, Katchampa

Tree. Leaves oblong, acuminate. Flowers white with yellow mouth, sweet scented. Planted in Gupteswar; also in Phulbani district.

Rauvolfia serpentina (Linn.) Benth. ex Kurz

S : Sarpagandha. V : Patalgaruda, Pathalgarudi

Erect perennial herb. Flowers pink or pinkish white. Fruit black when ripe. Kurtumgarh, Gurupriyo river bank (near Chitrakonda), Umerkote. *Sharma* 2893 & 3057, *Hemadri* 3834 & 3888. (A2 D2)

Rauvolfia tetraphylla Linn.

(*R.canescens* Linn.)

Perennial herb or undershrub. Leaves 3-4 at each node. Flowers white. Fruit green, turning black through red on ripening. Planted or running wild; Kalinga. *Hemadri* 3988.

Tabernaemontana divaricata (Linn.) R.Br.

Shrub. Flowers white. Corolla single or double. Planted in gardens, in both the districts.

Thevetia peruviana (Pers.) K.Schum.

(*T.nerifolia* Juss. ex Steud.)

S : Pitakaravira. V : Ganner, Konyari

Shrub or small tree. Leaves linear-lanceolate. Flowers yellow. Grown in gardens. Umerkote; also observed in Phulbani district. *Hemadri* 3891.

Wrightia arborea (Dennst.) Mabberly

(*W.tomentosa* Roem. & Schult.)

S : Krishnakutaja. V : Sit-kudai, Suta

Large shrub or small tree. Leaves densely tomentose. Flowers cream coloured or white with orange-red mouth. Ladda (near Rayagada), Budaguda (near Balliguda), Hathigam. *Hemadri* 3921, *Sharma* 2864, *Narayanappa* 2352. (A3 D3)

Wrightia tinctoria R.Br.

S : Asita Kutaja. V : Ankudu (Telugu)

Large shrub or small tree in vegetative condition. Latex milky. Found in both the districts.

(A2 D3)

ASCLEPIADACEAE

Calotropis gigantea (Linn.) R. Br.

S : Arka. V : Arka, Arkagatch; Jilledu (Telugu)

Shrub with milky latex. Flowers bluish-purple or white. Found in waste places. Kurtumgarh; also observed in Koraput district. *Sharma* 2900. (A3 D4)

Ceropegia hirsuta Wt. et Arn.

Hirsute climber. Flowers greenish-yellow with purple spots on corolla tube. Nuagam (near Balliguda). *Sharma* 3072. (A1 D2)

Gymnema sylvestre (Retz.) R. Br. ex Schult.

S : Meshashringi

Perennial, woody climber. Leaves ovate, tomentose. Found in vegetative condition. Manyamkonda (near Kalimela); also observed in Phulbani district. *Hemadri* 3823. (A2 D2)

Marsdenia tenacissima (Roxb.) Moon

S : Murva?

Perennial climber. Latex milky. Leaves cordate, densely tomentose. Found in vegetative condition. (A2 D2)

Pergularia daemia (Forsk.) Chiov.

S : Uttamarani. V : Uthurali, Utthurli, Utthurula, Utrali.

Perennial climber. Leaves cordate. Fruit a pair of follicles softly echinate. Found on hedges and in bushes. Kotagarh; also observed in Koraput district. *Sharma* 2482. (A3 D3)

Sarcostemma acidum (Roxb.) Voigt

S : Somavalli ?

Perennial, straggling, xerophytic shrub in vegetative condition. Stem green, internodes cylindrical, leaves scaly and deciduous. Latex milky. Found along Vamsadhara river near Rayagada. (A2 D2)

Tylophora indica (Burm.f.) Merr.

(*T. asthamatica* Wt.et Arn.)

S : Ajadvishta

Twining herb with perennial tufted roots. Leaves hairy, ovate - cordate. Found in road side bush between Pottangi & Sonki (A2 D2)

Tylophora rotundifolia Ham. ex Wt.

Creeping herb. Leaves shortly petioled. Orbicular, elliptic or broadly ovate. Flowers in umbellate cymes, pale-white. Kotagarh, Dabugam. *Sharma* 3113, *Narayanappa* 2389. (A2 D2)

PERIPLOCACEAE

Cryptolepis buchanani Roem. & Schult.

S : Krishna sariva. V : Gunamada, Khirolaum

Perennial climber. Leaves oblong-lanceolate. Flowers yellowish-green. Daringbadi, Hathigam. *Sharma* 2976, *Narayanappa* 2345. (A2 D3)

Hemidesmus indicus (Linn.) R. Br. ex Schult.

S : Sariva. V : Chemedi mulo, Sugandhi, Ananthamula, Drushtivoso, Palasana, Suguddimalo.

Perennial climbing undershrub. Root sweet scented. Leaves linear lanceolate or oblong-lanceolate. Found in vegetative condition. Ladda (near Rayagada), Kurtumgarh (near Balliguda). *Hemadri* 3903, *Sharma* 2891. (A2 D3)

STRYCHNACEAE

Strychnos nux-vomica Linn.

S : Visamushti. V : Gera, Kuchla

Tree. Leaves ovate or sub-orbicular with three strong and two weaker nerves from base. Fruit globose. Seeds discoid. Ladda (near Rayagada), Kotagarh. *Hemadri* 3907, *Sharma* 2510. (A2 D2)

Strychnos potatorum Linn. f.

S : Kataka. V : Gunjari, Kothako

Tree in vegetative condition. Raniguda (near Rayagada); also found in Phulbani district. *Hemadri* 3901. (A2 D3)

GENTIANACEAE

Canscora decussata (Roxb.) Schult. et Schult.

Erect, 3-chotomously branched herb with 4-winged stems, branches and pedicels. Hathigam. *Narayanappa* 2330. (A2 D3)

Canscora diffusa (Vahl) R. Br.

Erect, branched herb. Flowers pink - purplish. Found in moist-sandy places. Kotagarh. *Sharma* 2496. (A3 D3)

BORAGINACEAE

Coldenia procumbens Linn.

S : Tripakshee. V : Moyinibuta

Herb spreading on ground. Leaf crisped. Flowers white. Common weed of harvested paddy fields and dried up puddles. Karka (near Umerkota); also observed in Phulbani district. *Hemadri* 3897. (A3 D3)

Cordia dichotoma Forst.f.

S : Shleshmataka. V : Bahulo

Tree in vegetative condition. Found about Ramgiri near Metpad; also in Phulbani district. (A2 D2)

Cynoglossum lanceolatum Forsk.

Erect, hairy herb. Flowers white. Nutlets densely glochidiate. Balliguda, Kurtumgarh, Hathigam. *Sharma* 2549 & 3115, *Narayanappa* 2334. (A2 D2)

Heliotropium indicum Linn.

S : Hasti Sundi . V : Sabethi, Soru

Erect, annual herb. Flowers white. Found in waste places. Balliguda, Kalinga-G.Udaigiri. *Sharma* 2843, *Hemadri* 3974. (A2 D3)

Rotula aquatica Lour.

Perennial, woody herb or undershrub with bluish-pink flowers and in fruiting. Found along the rocky ledge of Kolab (Sabari) river near Gupteswar; also along Mahanadi near Boudh in Phulbani district. (A2 D3)

Trichodesma indicum (Linn.) R. Br.

S : Adhahpushpi. V : Hetamundia

Much branched, diffuse, hispid herb. Flowers bluish-pink or white. Balliguda, Simanbadi, Hathigam. *Sharma* 2945 & 3030, *Narayanappa* 2364. (A2 D3)

CONVOLVULACEAE

Argyreia daltoni C. B. Cl.

Strigosely-hairy or strigosely-pubescent climber. Cymes with persistent bracts. Beheda, Hathigam. *Narayanappa* 2309 & 2366

Argyreia nervosa (Burm.f.) Boj.

(*A.speciosa* Sweet)

S : Vriddadaru

Perennial climber, silvery white all over. Found in vegetative condition about Rayagada-Gumma (May). (A2 D2)

Erycibe paniculata Roxb.

Perennial, woody climber. Flowers white or pale-yellow, Fragrant, in terminal panicles. Found in cool places, near nalas & streams. Bonda hills, Daringbadi. *Hemadri* 3855, *Sharma* 2957. (A2 D2)

Evolvulus alsinoides (Linn.) Linn.

S : Shankhapushpi, Vishnukranta. V : Krishna-enkranti

Herb with numerous, prostrate, thinly or densely silky branches. Flowers blue. Fruits globose. Rayagada-Gumma, Balliguda, Beheda. *Hemadri* 3912, *Sharma* 2995, *Narayanappa* 2246. (A2 D3)

Evolvulus nummularius (Linn.) Linn.

Weak herb. Branches spreading on ground. Leaves orbicular. Flowers white. Fruits globose. Balliguda, Dabugam. *Sharma* 3149, *Narayanappa* 2388. (A2 D3)

Ipomoea aquatica Forsk.

S : Nalika. V : Thutikoora (Telugu)

Aquatic herb spreading on the water. Leaves ovate-hastate. Flower pinkish, showy. Found in both the districts. (A2 D3)

Ipomoea fistulosa Mart. ex Choisy

Erect - scandent, water loving undershrub. Introduced along the canal and tank bunds as soil binder. Flowers pinkish, showy. Found in both the districts.

Ipomoea mauritiana Jacq.

S : Kshira Vidari

Perennial climber. Leaves palmately lobed. Found in Koraput district. (A1 D1)

Ipomoea nil (Linn.) Roth

S : Krishna-bija

Climber. Leaves cordate, 3-5 lobed. Flowers purplish. Found in Koraput district. (A2 D2)

Ipomoea pes-tigridis Linn.

Trailing herb often spreading on the ground, densely bristly all over. Leaves digitately and sinuately lobed. Flowers white in dense cymes. Found in both the districts. (A2 D2)

Merremia gangetica (Linn.) Cufodont

S : Mushikaparni

Weak herb running and spreading on the ground. Flowers yellow. Found in both the districts. (A2 D1)

Merremia tridentata (Linn.) Hall. f.

Weak, trailing and twining herb. Leaves oblong-hastate, somewhat 3-dentate. Found in vegetative condition in both the districts. (A2 D2)

Merremia vitifolia (Burm.f.) Choisy

Climber, bristly all over. Leaves 5-angled or lobed. Flowers yellow. Found in Bonda hills. (A2 D2)

Rivea hypocrateriformis (Desv.) Choisy

Perennial climber, Leaves cordate-orbicular, ashy-beneath. Found in vegetative condition about Ladda near Rayagada, (A2 D3)

CUSCUTACEAE

Cuscuta reflexa Roxb.

S : Akashavalli. V : Nirmuli, Suinilova

Parasite with profusely branched, very long, wiry, yellow stem. Found on hedges & shrubs. Hathigam; also observed around Kelapoda-Phirangia (near Phulbani). *Narayanappa* 2333. (A2 D2)

SOLANACEAE

Capsicum annuum Linn.

S : Rakta-marica. V : Mirchi

Cultivated in both the districts for its fruit.

Datura innoxia Mill.

S : Dhattura bheda. V : Duddura, Dutthura

Erect herb. Flowers white. Fruit with long prickles. Found in both the districts. (A2 D3)

Datura metel Linn.

S : Dhattura . V : Kaaloduddura

Erect herb. Stem and flowers vinaceous purple. Fruit with blunt short prickles or tubercles. Found about Ladda near Rayagada; also in Phulbani district. (A2 D2)

Lycopersicon lycopersicum (Linn.) Korsten

The 'Tomato', it is cultivated for its edible fruit, in both the districts.

Nicotiana tabacum Linn.

S : Tamakhu. V : Tamakhu

The 'Tobacco', it is cultivated for smoking, on the Bonda hills plateau etc., also in Phulbani district.

Solanum erianthum D. Don

(*Solanum verbascifolium* auct. non Linn.)

Shrub with stellately tomentose, unarmed stem & branches. Leaves lanceolate or elliptic, acuminate, stellately tomentose. Flowers pale-white, in long-peduncled cymes. Daringbadi. *Sharma* 2970. (A2 D2)

Solanum incanum Linn.

V : Parsapa, Pithabaingan Choto

Erect undershrub or shrub, profusely branched and spiny all over. Flowers purple. Fruits globose, yellow. Kalimela. *Hemadri* 3827. (A2 D2)

Solanum indicum Linn.

S : Brihati. V : Tutuguno

Profusely branched, spiny shrub or undershrub. Flowers blue or white. Fruits globose. Belghar, Daringbadi; also observed in Koraput district. *Sharma* 2406 & 2922. (A2 D3)

Solanum melongena Linn.

S : Vrintaka. V : Baigono, Baingan

The 'Brinjal', it is cultivated for its vegetable fruit in both the districts.

Solanum myriacanthum Dunal

(*S.khasianum* Clarke)

V : Bejibaijan, Badabiji

Much branched & spiny herb or undershrub. Leaves tomentose. Flowers white. Fruits globose. Found in waste places. Daringbadi, Balliguda. *Sharma* 2972 & 3120. (A2 D2)

Solanum nigrum Linn.

S : Kakamachi

Erect, annual herb. Leaves ovate, irregularly toothed. Flowers white. Fruits globose. Rayagada, Hathigam; also observed in Phulbani district. *Hemadri* 3923, *Narayanappa* 2370. (A2 D2)

Solanum surattense Burm.f.

S : Kantakari . V : Ankranthi, Chokkada bhejiri, Dumaa bhejiri, Rengini bhejiri;

Revatimunaga (Telugu)

Trailing herb, spreading on the ground. Spiny all over. Flowers purple. Found about Chitrakonda; also in Phulbani district. (A2 D3)

Solanum torvum Swartz

V : Bonobaingan, Kantra

Shrub. Stem & branches spiny. Leaves ovate, somewhat lobed, non-spiny. Flowers white. Fruit globose. Near Gurupriyo river (Chitrakonda), Sarangada. *Hemadri* 3830, *Sharma* 2883. (A2 D2)

SCROPHULARIACEAE

Limnophila roxburghii G.Don

Aquatic herb. Leaves opposite, elliptic or ovate, narrowed at base into petiole, crenate or serrate. Found in vegetative condition. Kotagarh. *Sharma* 2507. (A2 D2)

Lindernia antipoda (Linn.) Alston

(*Ilysanthes veronicaefolia* Urb.)

Annual herb. Leaves oblanceolate, serrate. Found in flowering & fruiting near a waterpool in sandy soil. Chandrapur (near Muniguda). *Hemadri* 3934. (A2 D2)

Lindernia ciliata (Colsm.) Penn.

(*Bonnaya brachiata* Link & Otto)

Small herb. Leaves sessile, oblong, obtuse or sub-acute, sharply & closely spinulose-serrate. Flowers pink. Found in grassland & waste places. Balliguda. *Sharma* 3084. (A2 D3)

Lindernia crustacea (Linn.) F. v. Muell.

[*Vandellia crustacea* (Linn.) Benth.]

Small herb. Leaves ovate, entire or serrate. Flowers bluish-white. Found in wet places. Simanbadi. *Sharma* 2948. (A2 D3)

Mecardonia procumbens (Miller) Small

[*M.dianthera* (Sw.) Millsp.]

Annual, procumbent herb. Leaves obovate, serrate. Flowers axillary, solitary, yellow. Found in wet places. Chandrapur (near Muniguda), Simanbadi. *Hemadri* 3933 x, *Sharma* 2949. (A2 D2)

Scoparia dulcis Linn.

V : Bonogajari

Perennial, woody, erect herb. Leaves obovate-oblanceolate, serrate. Flowers white. Corolla fringed. Fruits globose, green. Kurtumgarh (near Balliguda); also observed in Koraput district. *Sharma* 3058. (A2 D3)

Sopubia delphinifolia (Linn.) G. Don

Pretty erect herb. Leaves cut into filliform segments. Flowers purple. Beheda. *Narayanappa* 2300. (A2 D2)

Striga angustifolia (Don) Sald.

[*S.euphrasioides* (Benth.) Benth.]

Erect herb with strigose, slender branches. Leaves linear. Flowers white. Balliguda. *Sharma* 3181. (A2 D2)

LENTIBULARIACEAE

Utricularia stellaris Linn.f.

Small aquatic plant. Bladders on leaf segments very minute. Flowers yellow, in racemes surrounded towards base by a whorl of floating narrowly ellipsoid vesicles. Found in ponds. Balliguda. *Sharma* 3199. (A2 D2)

BIGNONIACEAE

Dolichondrone falcata Seem.

Small tree. Fruit flat, long and falcate. Found in both the districts. (A2 D2)

Millingtonia hortensis Linn.f.

V : Akashamalli (Telugu)

Very tall tree. Flowers white with very long corolla tubes. A native of Burma and Malaysia, introduced and running wild about Gupteswar near Metpad; also found in Phulbani district.

Oroxylum indicum (Linn.) Vent.

S : Shyonaka . V : Phanphania; Kotadi Chettu, Pampuni, Pappeni, Ponponia (Telugu)

Small tree. Leaves very large, bipinnate. Fruits flat, large, sword-like. Seeds flat, papery, winged. Jhiripani; also observed in Koraput district. *Sharma* 2468. (A2 D2)

Stereospermum personatum (Hassk.) Chatterjee

Small tree. Leaves compound. Flowers in terminal fascicles. Corolla yellowish with purplish streaks, anthers violet. Fruit linear, 4-angled. Nakadisaroo (near Phulbani), also observed in Koraput district. *Hemadri* 3959. (A2 D3)

Stereospermum suaveolens (Roxb.) DC.

S : Patala. V : Padhel, Patoli, Pardi, Haramalli; Kalugudu (Telugu)

Large tree. Leaves large, imparipinnate. Fruits long, linear, usually curved. sub-cylindrical. Seeds winged, arranged in corky dissepiment. Kalimela-Podia, Hathigam, Kotagarh. *Hemadri* 3815, *Narayanappa* 2375, *Sharma* 2509. (A1 D3)

MARTYNIACEAE

Martynia annua Linn.

S : Kakanasa. V : Bhagonakho, Baghanakhi

Erect, annual herb growing in waste places. Flowers drooping, pink & dark purple, foxglove-shaped. Fruits with two sharp apical spines. Nuagam (near Balliguda) Beheda; also found about Gurupoda - Phirangia (Phulbani). *Sharma* 3091, *Narayanappa* 2322. (A2 D3)

PEDALIACEAE

Sesamum orientale Linn.

(*S. indicum* Linn.)

S : Tila. V : Tila, Tilli; Nung, Nuv (Telugu)

Erect, annual herb, more or less foetid, glandular and pubescent. Flowers purple, drooping. Cultivated for its oil yielding seeds in both the districts. Occasionally seen as an escape. Balliguda. *Sharma* 3007.

ACANTHACEAE

Andrographis echioides Nees

V : Lavalata

Erect, annual herb, densely hairy. Flowers purple- spotted. Balliguda, Beheda. *Sharma* 3016, *Narayanappa* 2279 & 2288. (A2 D3)

Andrographis paniculata (Burm.f.) Wall. ex Nees

S : Bhunimba. V : Bhuyilimbo, Bhuyinimba

Erect herb with quadrangular stems. Flowers white, purple spotted. Nakadisaroo-Phirangia (near Phulbani), Balliguda, Kalinga; also observed in Koraput district. *Hemadri* 3954, *Sharma* 3036, *Narayanappa* 2155. (A3 D3)

Barleria cristata Linn.

Erect or diffuse undershrub. Kalinga, Beheda, Hathigam. *Narayanappa* 2216, 2254 & 2324. (A2 D3)

Barleria prionitis Linn.

S : Sahachara. V : Daskaranta

Erect woody herb or under shrub with white spines. Found in vegetative condition, in both the districts. (A3 D3)

Barleria strigosa Willd.

V : Chavaldhua

Undershrub found in vegetative condition. Belghar. *Sharma* 2417. (A2 D2)

Crossandra undulaefolia Salisb.

V : Rango intola, Itla

Perennial undershrub with pink or light red flowers, A garden favourite, grown in both the districts.

Eranthemum purpurascens Nees

(*Daedalacanthus purpurascens* T.Anders.)

Under shrub with 4-angled stems. Flowers lilac or pinkish-purple. Kurtumgarh (near Balliguda). *Sharma* 2542. (A2 D3)

Hemigraphis latebrosa (Heyne ex Roth) Nees

Herb found in moist situations. Flowers bluish. Kotagarh; also observed in Koraput district. *Sharma* 2497. (A2 D2)

Hygrophila auriculata (Schumach.) Heine

S : Kokilaksha. V : Koilakha

Erect, annual, water-loving herb in dried up condition. Found in both the districts. (A3 D3)

Justicia adhatoda Linn.

(*Adhatoda vasica* Nees)

S : Vasa. V : Basango

Shrub found in vegetative condition. Planted as a hedge plant. Gurupoda - Phirangia (near Phulbani). *Hemadri* 3944.

Justicia diffusa Willd.

Herb with more or less 4-angled, grooved stems. Flowers pinkish. Balliguda. *Sharma* 3183. (A2 D3)

Justicia genderussa Burm.f.

Erect shrub in flowering. Grown as a hedge plant in Rayagada etc.; also in Phulbani district.

Justicia quinqueangularis Koen. ex Roxb.

Erect or ascending herb. Flowers white. Found in wet places. Balliguda. *Sharma* 3138.

(A2 D2)

Lepidagathis cristata Willd.

V : Katabutta

Erect or ascending herb. Flowers white. Found in wet places. Balliguda. *Sharma* 3138. (A2 D2)

Peristrophe bicalyculata (Retz.) Nees

S : Kakajangha

Erect, annual herb. Flowers blue or purplish. Found in waste places. Kotagarh; also found near Govindpalli (Jeypore). *Sharma* 2531. (A3 D3)

Petalidium barlerioides (Roth) Nees

Straggling or erect shrub. Flowers in dense or subcapitate spikes with large, green veined bracteoles. Kalinga; also observed in Koraput district about Chitrakonda. *Narayanappa* 2157. A2 D2

Rhinacanthus nasutus (Linn.) Kurz

(*R.communis* Nees)

S : Yuthiparni

Undershrub. Flowers white. Dasingbadi. *Sharma* 2983. (A2 D3)

Ruellia cernua Roxb.

Erect herb or undershrub. Flowers Purplish-white. Kurtumgarh (near Balliguda). *Sharma* 3054. (A2 D2)

Rungia parviflora Nees

Diffuse or erect herb. Flowers clustered in secund spike. Hathigam. *Narayanappa* 2344. (A2 D3)

THUNBERGIACEAE

Thunbergia alata Bojer ex Sims

Perennial climber in attractive fowers. Corolla yellow with purple throat. Grown in Pottangi gardens. A native of Tropical Africa.

Thunbergia laevis Nees

(*T. fragrans* Roxb.)

Slender twiner. Flowers white. Daringbadi. *Sharma* 2968. (A2 D2)

VERBENACEAE

Callicarpa arborea Roxb.

Small tree. Leaves ovate, leathery, ashy beneath. Flowers pink or purple in panicled cymes. Young fruits green. Gumma-Kumbhikota (near Rayagada), Daringbadi, Balliguda. *Hemadri* 3971, *Sharma* 2901 & 3152. (A2 D3)

Clerodendrum indicum (Linn.) Ktze.

(*C. siphonanthus* R.Br.)

Tall annual with straight hollow stems. Leaves whorled or opposite. Flowers with long slender corolla tube. Dabugam. *Narayanappa* 2391 (A2 D2)

Clerodendrum serratum (Linn.) Moon

S : Bharangi

Shrub or undershrub. Leaves opposite or 3-nately whorled, coarsely serrate. Flowers bluish-white. Kurtumgarh (near Balliguda), Daringbadi, Beheda. *Sharma* 2981 & 3055, *Narayanappa* 2313. (A2 D2)

Clerodendrum viscosum Vent.

V : Komutia, Bandarigatcho

Shrub with densely hairy branches. Leaves large, ovate, usually cordate. Flowers in large, terminal, sub-corymbose panicles, white. Fruiting calyx purple & attractive. Bonda hills, Kotagarh, Balliguda. *Hemadri* 3999. *Sharma* 2418 & 2505. (A3 D3)

Duranta repens Linn.

V : Gadyakonta

Shrub. Flowers bluish. Fruits orange-yellow. A hedge plant. Balliguda, Kalinga. *Sharma* 3133, *Narayanappa* 2132.

Gmelina arborea Roxb.

S : Asmaree, Gambhari. V : Gambhari, Gumbhar, Gumbhri, Butalo

Tree. Leaves ashy beneath. Flowers yellow, purplish within the tube. Fruit obovoid. Manmunda (near Boudh), Daringbadi; also observed near Chitrakonda and Sarangada. *Hemadri* 3965, *Sharma* 2923. (A2 D3)

Lantana camara Linn. var. ***aculeata*** (Linn.) Moldenke

V : Dantari, Balaikonta, Katchompa

Prickly shrub in flowering & fruiting. Balliguda, Dabugam; also observed around Umerkote & G. Udaigiri. *Sharma* 3046, *Narayanappa* 2393. (A3 D4)

Lippia javanica (Burm.f.) Spreng.

V : Nagairi

Perennial undershrub or shrub. Leaves ovate, toothed, aromatic. Flowers in heads, rose-red. Found along the banks of Kolab (Sabari) river. Gupteshwar (near Metpad). *Hemadri* 3870. (A2 D2)

Phyla nodiflora (Linn.) Greene

S : Jalapippali

Weak herb spreading on the moist ground rooting at nodes. Flowers forming spike- like heads. Found in both the districts. (A3 D3)

Premna latifolia Roxb.

S : Agnimantha. V : Aggibatthu

Small tree. Leaves ovate-lanceolate, 2-3 per node. Flowers greenish-white in cymes. Fruits green when young, globose. Ramgiri (near Metpad), Simanbadi, Daringbadi. *Hemadri* 3873, *Sharma* 2938, 2956, 2958 & 2985. (A2 D2)

Pygmaeopremna herbacea (Roxb.) Moldenke

(*P. herbacea* Roxb.)

Herbaceous plant. Leaves sessile, obovate, coarsely serrate. Flowers in small corymbs. Beheda. *Narayanappa* 2289. (A2 D2)

Stachytarpheta jamaicensis (Linn.) Vahl

[*S. indica* (Linn.) Vahl]

V : Jaljal, koraputia buta

Erect herb with terete stems. Flowers purplish blue or white. Found in waste places and along road side. Daringbadi, Nuagam (near Balliguda), Dabugam. *Sharma* 2908 & 3044, *Narayanappa* 2380. (A3 D4)

Symphorema polyandrum Wt.

Perennial, scandent or straggling shrub. Fruits ovoid, enclosed by persistent, toothed, funnel-shaped calyx. Chitrakonda-Balimela road; also observed in Phulbani district. *Hemadri* 3837. (A2 D3)

Tectona grandis Linn.f.

S : Shaka. V : Sagwan, Sagavan

Tree in flowering. Plantations frequent in forests of both the districts. Kotagarh, *Sharma* 3112.

Vitex negundo Linn.

S : Nirgundi. V : Begunia, Degunia, Niligundi, Nirgundi; Vayi, Vavili (Telugu)

Large shrub or small tree. Leaves 3-5 foliolate. Flowers bluish-purple. Found on road side and as a hedge plant. Babadongia-Phirangia (near Phulbani), Daringbadi, Kalinga; also observed in Koraput district. *Hemadri* 3951, *Sharma* 2904, *Narayanappa* 2200. (A3 D3)

Vitex peduncularis Wall.

V : Chodaigudi, Konchela

Small tree. Leaves 3-foliolate. Flowers white. Fruits globose, green when young with persistent calyx. On way to Gurupriyo from Chitrakonda, Budaguda forest (near Balliguda). *Hemadri* 3832, *Sharma* 2868. (A1 D2)

LAMIACEAE

Anisochilus carnosus (Linn.f.) Wall.

V : Pokosunga

Erect, annual, aromatic, fleshy herb. Found in rocky places. Hathigam; also observed in Phulbani district. *Narayanappa* 2353. (A2 D3)

Anisomeles indica (Linn.) O. Ktze.

Erect, aromatic, softly pubescent herb. Beheda. *Narayanappa* 2238. (A3 D3)

Colebrookia oppositifolia Sm.

V : Tulia

Softly wooly shrub. Leaves large, tomentose. Flowers white. Belghar, Kalinga; also observed in Koraput district. *Sharma* 2434, *Narayanappa* 2134 & 2188. (A2 D3)

Hyptis suaveolens (Linn.) Poit.

V : Gondri, Damana

Tall, annual, aromatic herb. Flowers bluish. Found in waste places. Beheda; also observed about Muniguda - Panimunda. *Narayanappa* 2286. (A3 D4)

Leonotis nepetifolia (Linn.) Ait. f.

S : Granthiparni. V : Barcha

Tall, annual herb. Whorled fruiting calyces forming spinose balls. Found in waste places. Beheda; also observed in Phulbani district. *Narayanappa* 2319. (A2 D3)

Leucas lavandulifolia J.E.Sm.

(*L.linifolia* Spreng.)

V : Goyasa, Gubi; Tummi (Telugu)

Erect, annual herb. Leaves linear-lanceolate. Flowers white, in globose heads at the upper most one or two nodes. Bonda hills; also observed in Phulbani district. *Hemadri* 3858. (A2 D3)

Leucas mollissima Wall. ex Benth.

V : Khodagodi

Straggling perennial herb. Leaves ovate. Flowers white. Beheda, Dabugam; also observed in Phulbani district. *Narayanappa* 2262 & 2383. (A2 D2)

Leucas montana (Roth) Spreng.

Sub-erect or diffuse herb with numerous stems from a woody root stock. Flowers white. Balliguda. *Sharma* 3017. (A2 D2)

Leucas nutans (Roth) Spreng.

V : Geiso

Diffuse herb. Flowers white. Found in open moist places. Balliguda. *Sharma* 3014. (A2 D2)

Ocimum americanum Linn.

(*O.canum* Sims)

Aromatic weed growing in waste places, along road side and also in paddy fields. Flowers white with purple filaments. Manyamkonda (near Kalimela), Jhiripani, Balliguda. *Hemadri* 3821, *Sharma* 2470 & 3116. (A3 D3)

Ocimum basilicum Linn.

V : Dulva, Kappar Kaanthi

Sweet scented, perennial, erect, undershrub in flowering and fruiting. Planted about Ramgiri-Metpad; also in Phulbani district.

Ocimum gratissimum Linn.

Erect, profusely branched, aromatic herb. Corolla white. Calyx purplish. Bonda hills. *Hemadri* 3856. (A2 D2)

Ocimum sanctum Linn.

S : Tulasi. V : Tulasi

Erect, woody herb or undershrub. Sweet scented. Planted. Kalinga; also observed in other localities of both the districts. *Narayanappa* 2234.

Orthosiphon rubicundus (G.Don) Benth.

Erect herb with tuberous roots. Flowers white or bluish-white. Chitrakonda-Balimela road, Daringbadi, Barakhambha (near Balliguda), Kalinga. *Hemadri* 3840, *Sharma* 2931 & 3160, *Narayanappa* 2136 & 2215. (A2 D2)

Plectranthes mollis (Ait.) Spreng.

(*P. incanus* Link)

V : Gondri

Erect herb with square stems and long petioled cordate leaves. Flowers purple. Found in waste places. Balliguda, Beheda. *Sharma* 3119, *Narayanappa* 2296. (A2 D2)

Pogostemon benghalensis (Burm.f.) O.Ktze.

(*P. plectranthoides* Desf.)

Erect undershrub or shrub. Kalinga; also found in Bonda hills. *Narayanappa* 2187. (A2 D3)

Pogostemon myosuroides (Roth) El-Gazzar ex Watson

[*Dysophylla myosuroides* (Roth) Benth.]

V : Iswaradal

Erect, aromatic herb. Flowers in terminal, cylindrical spikes. Chitrakonda - Gurupriyo river. *Hemadri* 3829. (A2 D2)

NYCTAGINACEAE

Boerhaavia diffusa Linn.

S : Punarnava. V : Atikapoda, Kopra sagu

Perennial diffuse herb. Leaves usually whitish beneath. Flowers very small, pink. Fruits obovoid. Found in waste places. Balligudà; also observed near Umerkote and throughout both the districts. *Sharma* 3153. (A3 D4)

Bougainvillea spectabilis Willd.

Scandent, woody shrub. Grown in gardens in both the districts for its variously coloured showy bracteate inflorescence. A native of Brazil.

Mirabilis jalapa Linn.

V : Baanam phul

Erect, perennial herb with tuberous root. Flowers crimson, yellow or white, open in evening. Sweet scented. Fruits globose, black when dried, resembling black peppers. The 'Marvel of Peru', it is grown in gardens of both the districts.

AMARANTHACEAE

Achyranthes aspera Linn.

S : Apamarga. V : Apamarang, Opamarga, Dhatrikota, Duchabondra; Dubbinachettu (Telugu)

Erect or sub-scandent herb with elliptic, obovate or sub-orbicular leaves and long spikes of green or pinkish deflexed flowers. Fruiting bracteoles spinous. Belghar, Kurtumgarh (near Balliguda), Beheda. *Sharma* 2448 & 2899, *Narayanappa* 2287. (A3 D4)

Aerva lanata (Linn.) Juss.

S : Pashanabheda ? V : Sanna sondo

Perennial herb. Flowering spikes white. Kotagarh; also observed in Koraput district. *Sharma* 3104. (A3 D4)

Aerva sanguinolenta (Linn.) Bl.

[*A.scandens* (Roxb.) Wall.]

Straggling herb. Flowers in dense spikes, white. Belghar, Kalinga. *Sharma* 2412, *Narayanappa* 2227. (A2 D2)

Alternanthera pungens Kunth

V : Rosagutho

Prostrate herb spreading on ground. Found in flowering & fruiting in waste places. Balliguda; also observed about Chitrakonda - Gurupriyo river. *Sharma* 3118. (A2 D3)

Alternanthera sessilis (Linn.) R. Br.

S : Matsyakshi. V : Mandaranga Sag, Madrang

Prostrate, much branched herb rooting from the nodes. Leaves lanceolate. Flowers white, in short spikes. Found in wet places. Pottangi, Kotagarh. *Hemadri* 3812, *Sharma* 2495 & 3103. (A3 D3)

Amaranthus hybridus Linn.

Erect herb in fruiting spikes. Balliguda. *Sharma* 3193.

Amaranthus spinosus Linn.

S : Tanduliya. V : Konta Koda, Konta Bajji sag, Kanta mariso

Erect or sub-erect, spiny herb. Flowers greenish or purplish, in terminal panicled spikes. Found in waste places. Simanbadi, Kotagarh; also observed in Koraput district. *Sharma* 2951 & 3107. (A3 D4)

Amaranthus tricolour Linn.

V : Bajjisag

Erect, fleshy herb, cultivated for its vegetable leaf. Found in both the districts.

Amaranthus viridis Linn.

(*A.gracilis* Desf.)

V : Baramasi Sag, Kodasago, Levitiakoda

Erect or sub-erect herb in greenish or purplish terminal panicled spikes. Pottangi (near Koraput), Rayagada; also observed in Phulbani district. *Hemadri* 3801 & 3925. (A2 D3)

Celosia argentea Linn.

V : Kukdapakki, Baruva

Erect herb. Flowers white-pink, in dense terminal spikes. A weed of cultivated fields & waste places. Kotagarh, Kalinga; also observed in Koraput district. *Sharma* 3106, *Narayanappa* 2232. (A3 D3)

Gomphrena celosioides Mart.

Erect or diffuse herb. Leaves oblong. Flowers white, in terminal spikes. Found in waste places and along road side. Kotagarh; also observed in Koraput district. *Sharma* 3111. (A2 D3)

Pupalia lappacea (Linn.) Juss. var. ***lappacea***

[*P. atropurpurea* (Lamk.) Moq.]

Herb with long straggling branches. Flowers in spiked clusters. Balliguda. *Sharma* 3000. (A2 D2)

CHENOPODIACEAE

Chenopodium ambrosioides Linn. var. ***anthelminticum*** (Linn.) Gray

Erect annual aromatic herb, in vegetative condition. (June). Abundant in the open forest areas between Pottangi & Sonki. (A2 D2)

BASELLACEAE

Basella alba Linn.

S : Potaki. V : Poyisaag

Perennial climber. Stem green, fleshy and mucilaginous. Cultivated in both the districts for its leafy stem, eaten as vegetable.

POLYGONACEAE

Polygonum barbatum Linn.

Water-loving undershrub with erect stem. Stipules fringed. Flowers white in terminal spikes. Found along the rivers Kolab (Sabari) near Gupteswar and Mahandi near Boudh. (A2 D3)

Polygonum glabrum Linn.

Water-loving undershrub with erect stem. Stipules entire. Flowers pink in terminal spikes. Found in both the districts, in association with the above speices. (A3 D3)

Polygonum limbatum Meissn.

Water-loving, robust plant with ascending - erect stem. Found in vegetative condition (May) on way from Chitrakonda - Gurupriyo river. (A2 D2)

Polygonum pedunculare Wall.

Water-loving plant with weak stem. Found in terminal flowering & fruiting. Flowers white or pinkish. Found in wet places, along nalas & rivers. Belghar; also observed on way from Chitrakonda to Gurupriyo river. *Sharma* 2410. (A2 D2)

Polygonum plebejum R. Br.

V : Chati baji

Small prostrate herb. Leaves oblong-elliptic. Flowers axillary, pink. Common weed of harvested paddy fields. Karka (near Umerkote). *Hemadri* 3899. (A3 D3)

Polygonum serrulatum Lagasca

Water-loving plant with decumbent stems. Stipules with bristles. Kalinga. *Narayanappa* 2223. (A2 D2)

Rumex vesicarius Linn.

S : Chukra ? V : Chukkakoora (Telugu)

Erect, annual herb. Cultivated in both the districts for its sour leafy vegetable.

PIPERACEAE

Piper longum Linn.

S : Pippali. V : Pippali, Pippoli

Perennial herb in vegetative condition. Found as undergrowth. Rare. Gupteswar (near Metpad). *Hemadri* 3872. (A2 D1)

Piper nigrum Linn.

S : Maricha. V : Dolo maricho; Miriyalu (Telugu)

Perennial climber with clinging roots. Fruiting spikes green, turning to red at maturity. Cultivated. Pottangi, Forest Research Garden, Kalinga. *Hemadri* 3811, *Narayanappa* 2208

LAURACEAE

Cinnamomum verum Presl

(*C.zeylanicum* Bl.)

S : Twak

Small tree. Leaves thick, opposite or sub-opposite, 3-nerved. Young fruits green, ovoid, perianth lobes 6, persistent. Cultivated. Kalinga. *Hemadri* 3986, *Narayanappa* 2211.

Litsea glutinosa (Lour.) Robinson

(*L.sebifera* Pers.)

S : Medasaka. V : Tangia china, Gajphala gatcho

Small tree. Leaves ashy beneath, slimy on chewing. Faintly aromatic. Flowers in axillary cymes, buds greenish, globose. Metpad, Nakadisaroo (near Phulbani), Balliguda. *Hemadri* 3885 & 3952, *Sharma* 3134. (A2 D2)

Litsea monopetala (Roxb.) Pers.

Small tree found in fruiting along rivers. Balliguda, Kalinga. *Sharma* 2853, *Narayanappa* 2190. (A2 D2)

CASSYTHACEAE

Cassytha filiformis Linn.

Leafless parasite. Stems wiry, green. Flowers in spikes. Fruits globose. Munmunda-Boudh road, Kurtumgarh (near Balliguda); also observed in Koraput district. *Hemadri* 3957, *Sharma* 3060. (A2 D2)

PROTEACEAE

Grevillea robusta A.Cunn.

Tall tree. Leaves pinnately dissected. A native of Australia, it is planted by Forest Department in both the districts.

LORANTHACEAE

Dendrophthoe falcata (Linn.f.) Ettingst.

S : Bandaka. V : Madang

Green parasitic shrub. Leaves variously shaped, ovate- linear- lanceolate,thick, glabrous. Flowers reddish-yellow. Fruit oblong. Daringbadi, Dabugam. *Sharma* 2936, *Narayanappa* 2386. (A2 D3)

Loranthus scurrula Linn.

V : Dhaduk

Parasitic, much branched shrub or undershrub. Young parts hoary or rusty. Flowers green. *Sharma* 2430. (A2 D2)

Taxillus tomentosus (Roth) Tiegh.

Parasitic on tree branches. Leaves with brownish tomentum. Few, found in vegetative condition or in flowering in both the districts. (A2 D2)

Viscum monoicum Roxb. ex DC.

Parasitic, tufted shrub with slender terete branches compressed at the ends. Fruit oblong. *Sharma* 2524. (A2 D2)

Viscum orientale Willd.

V : Madang

Stem parasite on *Punica granatum* Linn. Leaves obovate. Flowers & young fruits green. Pottangi. *Hemadri* 3804. (A2 D2)

SANTALACEAE

Santalum album Linn.

S : Chandana. V : Chandano

Small tree in flowering & fruiting. Planted by Forest Department. Kalinga; also observed in Koraput district. *Narayanappa* 2131, *Hemadri* 3868.

EUPHORBIACEAE

Acalypha indica Linn.

S : Harinmanjari. V : Menjathi, Motchidal

Annual, erect herb. Leaves somewhat orbicular, long petioled. Flowers green with leafy bract, monoecious, male flowers above the female. Found in waste places. Rayagada, Kotagarh. *Hemadri* 3922, *Sharma* 2484. (A3 D3)

Antidesma diandrum (Roxb.) Heyne ex Roth

V : Pullor, Bataraj, Sardikusa

Large shrub. Leaves sour in taste. Flowers minute, green, unisexual. Fruits subglobose. Metpad, Kotagarh, Daringbadi, Balliguda. *Hemadri* 3877, *Sharma* 2499, 2960 & 3023. (A2 D3)

Antidesma ghaesembilla Gaertn.

Shrub. Leaves grey or hoary tomentose when young. Fruits oblong. Balliguda. *Sharma* 3002. (A2 D2)

Baliospermum montanum (Willd.) Muell. - Arg.

S : Danti. V : Dambojoda, Dumajoda

Erect herb or undershrub with numerous shoots from a perennial root stock. Flowers greenish or pale-yellow, fascicled, axillary. Belghar-Jhiripani; also observed about Kotagarh, Chitrakonda (on way to Sileru). *Sharma* 2476. (A2 D2)

Breynia retusa (Dennst.)Alston

(*B.patens* Benth.)

Shrub. Flowers axillary, usually 2 - 3 from each axil. Balliguda. *Sharma* 3145. (A2 D2)

Bridelia montana Willd.

V : Mettadasa, Pansod, Panchoga, Panchor.

Large shrub with profuse scandent branching. Leaves obovate. Common about Balimela in vegetative conditon. (A3 D3)

Bridelia retusa (Linn.) Spreng.

V : Kosi, Kasi, Asano

Tree. Leaves elliptic-oblong, acute or obtuse. Flowers small, greenish. Fruit globose. Jhiripani, Kurtumgarh (near Balliguda), Beheda, *Sharma* 2471 & 3061, *Narayanappa* 2310. (A2 D3)

Cleistanthus collinus (Roxb.) Benth. ex Hook. f.

V : Korda, Karda, Korodo

Small tree with orbicular, obovate or elliptic leaves. Fruits somewhat 3-gonous. Chitrakonda-Balimela road, Jhiripani, Kurtumgarh, Balliguda, Kalinga. *Hemadri* 3842, *Sharma* 2461, 2890 & 3024, *Narayanappa* 2173. (A3 D4)

Croton bonplandianum Baill.

V : Bonomircho

Erect profusely branched herb. Flowers monoecious. Fruits of 3-cocci. Common weed of waste places about Rayagada and also throughout Koraput and Phulbani districts. A native of Paraguay (South America).

Euphorbia geniculata Ort.

Erect, annual herb in greenish, terminal cyathia. Latex milky. Fruits of 3-cocci. Pottangi. *Hemadri* 3805. (A2 D2)

Euphorbia hirta Linn.

S : Dugdhika. V : Narhari, Chittakuta, Chitaguti, Chithakutti, Dudili, Dudoli, Horihorika, Jutikunta, Khirogatch, Uthisi

Erect or decumbent herb, hairy all over. Latex milky. Cyathia in axillary cymes. A common weed. Jhiripani, Balliguda, Kurtumgarh, Kalinga; also observed in Koraput district. *Sharma* 2465, 2895 & 3031, *Narayanappa* 2165. (A3 D4)

Euphorbia neriifolia Linn.

S : Patra śnuhi

Perennial, profusely branched shrub. Latex milky. Branches 5-angled with prickles along the twisted angles. Leaves large, oblanceolate. Found in vegetative condition about Govind palli(May). (A2 D2)

Euphorbia nivulia Buch. - Ham.

S : Patra snuhi ?

perennial shrub with profuse branching. Latex milky. Leaves large, oblanceolate. Branches cylindrical with prickles. Frequent in both the districts. (A2 D3)

Euphorbia prostrata Ait.

V : Rongoalathi

Weak, diffuse herb, greenish or purplish. Latex milky. Capsule hairy along the 3 angles or keels. Chitrakonda- Gurupriyo river; also observed in Phulbani district. *Hemadri* 3833. (A2 D3)

Euphorbia thymifolia Linn.

S : Laghu dugdhika. V : Rangoalathi

Weak, diffuse, greenish-purplish herb. Latex milky. Whole plant, including the capsules hairy. A weed in both the districts. (A2 D3)

Glochidion velutinum Wt.

Large shrub or small tree with pubescent or tomentose leaves and shoots. Flowers small, whitish or pale-yellow. Fruits depressed. Daringbadi, Balliguda. *Sharma* 2974 & 3154. (A1 D2)

Homonoia riparia Lour.

V : Thorthori

Water - loving shrub. Leaves linear-lanceolate or linear-oblong. Fruits globose. Frequent in rocky river-beds. Balliguda, Kalinga; also observed about Metpad, Rayagada. *Sharma* 3192, *Narayanappa* 2163. (A3 D3)

Jatropha curcas Linn.

S : Dravanti ? V : Gabo, Lonkajoda, Lonka halogatcho; Nepalamu(Telugu)

Large shrub or small tree. Leaves shallowly lobed, broadly ovate-cordate. Fruit globose, green with 3-cocci. Planted as hedge plant. Gurupoda (near Phirangia) ; also observed in Koraput district. *Hemadri* 3945.

Jatropha gossypifolia Roxb.

Shrub. Leaves reddish-brown, deeply 3-5 lobed, glandular along the margins. Flowers monoecious, reddish. Fruits green with 3-cocci. Common weed about Umerkote;also throughout both the districts. (A3 D3)

Macaranga peltata (Roxb.) Muell.-Arg.

Tree in vegetative condition. Leaves ovate, peltate. Found in Bonda hills; also in Phulbani district. (A2 D2)

Mallotus philippensis (Lamk.) muell.-Arg.

S : Kampillaka. V : Sindurogatcho, Kamala gundi, Sindori

Tree.- Leaves ovate or rhomboid with red glands beneath. Fruits densely covered with red glands. Belghar, Balliguda, Hathigam. *Sharma* 2440 & 3194, *Narayanappa* 2326. (A3 D3)

Manihot esculenta Crantz

V : Kaato Konda

Erect shrub. Leaves palmately lobed. Cultivated for its edible root about Bonda hills and also in other parts of Koraput & Phulbani districts.

Pedilanthus tithymaloides (Linn.) Poit.

V : Basam potro

Perennial, xerophytic under-shrub. Latex milky. Leaf and stem dark green. Found in vegetative condition in Rayagada gardens. A native of Tropical America, it is planted in both the districts.

Phyllanthus amarus Schum. et Thonn.

S : Bhumyamalaki. V : Badi aonla, Bari amla

Erect, annual herb. Flowers greenish-white. A weed of waste places and gardens. Kalinga-G.Udaigiri, Balliguda; also observed throughout both the districts. *Hemadri* 3981, *Sharma* 3140. (A2 D4)

Phyllanthus debilis Ham.

Erect, annual herb with ovate-lanceolate leaves. Flowers greenish, monoecious. Found in forest under growth. Balliguda; also observed in other areas of both the districts. *Sharma* 3029. (A2 D3)

Phyllanthus disticus (Linn.)Muell.-Arg.

V : Raj Avula

Small tree grown for its dorsally compressed and ribbed, sour-sweet, fleshy fruit. Found in backyards in both the districts.

Phyllanthus emblica Linn.

(*Emblica officinalis* Gaertn.)

S : Amalaki. V : Aonla, Aula

Small Tree. Fruits globose, succulent, green when young, yellowish or rarely pinkish on ripening. Kotagarh, Balliguda, Kalinga; also observed throughout the forests of both the districts. *Sharma* 2525, 2862 & 3043, *Narayanappa* 2142. (A2 D3)

Phyllanthus lawii Grah.

Erect prickly shrub forming clumps along the river-bank. Found along the river Mahanadi near Boudh. (A3 D2)

Phyllanthus reticulatus Poir.

S : Krishnakambhoji. V : Bala datun, Jojangi

Straggling or scandent shrub. Kalinga, Dabugam; also found about Gupteswar. *Narayanappa* 2178 & 2394. (A3 D3)

Phyllanthus virgatus Forst. f.

(P. simplex Retz.)

V : Biradi pello

Herb with numerous slender branches from a somewhat woody stock..Leaves linear- oblong, sub-sessile. Fruit globose. Balliguda, Hathigam. *Sharma* 2997, *Narayanappa* 2340. (A2 D3)

Ricinus communis Linn.

S : Eranda. V : Joda, Jodia

Shrub or small tree. Fruit of 3-cocci, spinous. Common in waste places as escape; also cultivated for its oil yielding seeds in both the districts. Balliguda. *Sharma* 3132.

Sebastiana chamaelea (Linn.) Muell.-Arg.

Erect annual herb. Leaves linear-oblong. Fruits of 3-cocci with toothed keels. Found about Phulbani; also in Koraput district. (A2 D2)

Securinega virosa (Roxb. ex Willd.) Baill.

Shrub. Flowers minute, green, Kurtumgarh (near Balliguda); also observed in Koraput district. *Sharma* 2894. (A2 D3)

Tragia involucrata Linn.

S : Vrischikali. V : Kasalakku

Perennial, straggling herb. Leaves ovate, dentate. Flowers monoecious. Capsule and persistent perianth lobes covered with stinging hairs. Panimunda (near Muniguda), Barakhambha (near Balliguda). *Hemadri* 3931, *Sharma* 3164. (A2 D2)

Trewia polycarpa Benth.

(*T.nudiflora* Linn.)

V : Pani-gambhari

Tree somewhat resembling *Gmelina arborea.* Leaves ovate with rounded or cordate base. Fruit globose. Occasional along rivers. Balliguda . *Sharma* 2854. (A1 D2)

ULMACEAE

Holoptelea integrifolia (Roxb.) Planch.

S : Chirabilva. V : Dhauranjan

Tree in vegetative condition. Found about Gupteawar near Metpad and Kalimela; also in Phulbani district. (A2 D3)

Trema orientalis (Linn.) Bl.

V : Sabjeeb, Kharkas

Small tree. Leaves oblique at the base and more or less white beneath with silky hairs. Flowers small, green. Kurtumgarh, Balliguda; also observed in Bonda hills. *Sharma* 2896 & 3157. (A3 D3)

MORACEAE

Artocarpus heterophyllus Lamk.

S : Panasa. V : Panasa, Ponoso

Tree in fruiting. Gurupoda-Phirangia (near Phulbani); also observed throughout both the districts. *Hemadri* 3948. (A3 D3)

Artocarpus lacucha Buch. - Ham.

(*A. lakoocha* Roxb.)

S : Lakucha. V : Jevuto

Tree. Fruits orange-yellow, irregularly globose in shape, about 6 cm across, pulp sweet & sour in taste when ripe, seeds white. Gurupoda (near Phulbani); also observed in Kalinga - G.Udaigiri area. *Hemadri* 3949. (A1 D2)

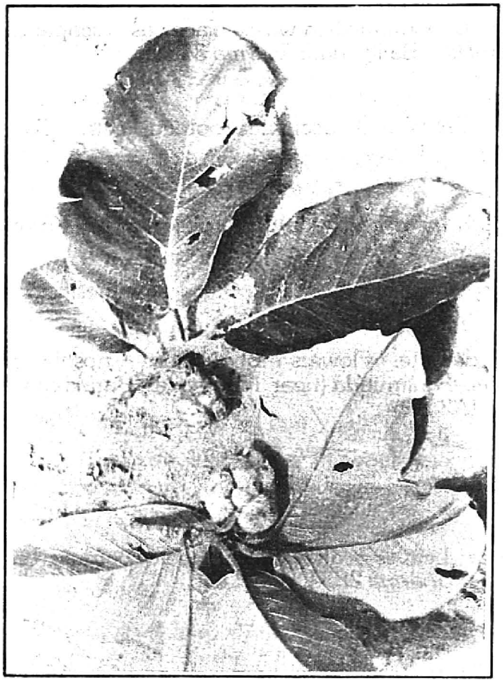


Fig. No. 25
Fruiting twig of *Artocarpus lacucha* :
Specific epithet is based on Sanskrit name

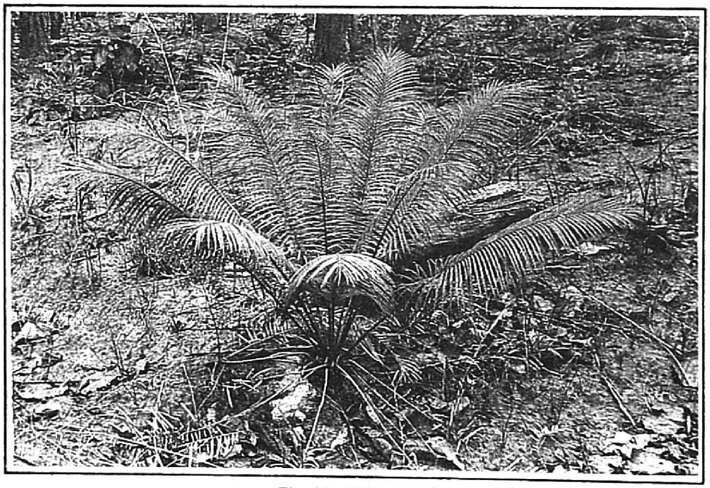


Fig. No. 26
Cycas circinalis :
A substitute for `Vidari'

Ficus benghalensis Linn.

S : Vata. V : Boro , Bot, bar

An avenue tree in red figs. Occasional in forest areas, but frequently planted. Balliguda, Hathigam; also observed around Umerkote and other areas of both the districts. *Sharma* 2863, *Narayanappa* 2369.

Ficus hispida Linn.f.

S : Kakodumbarika. V : Geriveli, Kursali gatcho, Balu dimari

Large shrub or small tree in figs. Found along rivers and nalas. Balliguda, Dabugam. *Sharma* 2847, *Narayanappa* 2397 . (A3 D3)

Ficus microcarpa Linn. f.

(*Ficus retusa non* Linn.)

V : Gastha

Large epiphyte growing on a tree in figs. Rayagada, Daringbadi. *Sharma* 2903. (A2 D2)

Ficus racemosa Linn.

S : Udumbara. V: Dimri

Tree in vegetative condition or in young figs. Found in both the districts. (A2 D3)

Ficus religiosa Linn.

S : Aswatha. V : Osthu, Urthogatch, Raavi (Telugu)

Large tree in vegetative condition. Often found as avenue tree, in both the districts.

Ficus semicordata Buch. - Ham.ex J.E. Sm.

V : Podai, Podayi

Large shrub or small tree. Leaves semi-cordate and attractive. Few, found in vegetative condition in Chitrakonda; also in Phulbani district. (A2 D2)

Ficus tinctoria Forst. f. ssp. ***parasitica*** (Willd.) Corner

(*F. gibbosa* Bl.var. *parasitica* King)

V : Tikana, Gasthi

Large epiphyte in figs. Kotagarh, Kalinga; also observed in Koraput district. *Sharma* 2511, *Narayanappa* 2209. (A2 D2)

Ficus virens Ait.

(*F. infectoria* Roxb. & *F. lacor* Buch.-Ham.)

S : Plaksha. V : Jari

Tree in vegetative condition. Daringbadi. *Sharma* 2966. (A2 D2)

Morus alba Linn.

V : Tooth, Tootho

Large shrub or small tree. Leaves ovate, entire, 3-lobed, margins toothed. Found in vegetative condition. Planted. Umerkote Forest Rest House; also observed in Phulbani district. *Hemadri* 3890.

Streblus asper Lour.

S : Sakhota. V : Hirtonimranu, Sahada

Large shrub or small tree in vegetative condition. Ladda (near Rayagada), Kalinga; also observed near Phulbani and other places in both the districts. *Hemadri* 3908, *Narayanappa* 2213. (A2 D3)

URTICACEAE

Boehmeria platyphylla Don var. ***longissima*** Baker

V : Kranti

Erect, suffruticose herb. Flowers in interrupted fascicles on long spikes. Found in cool places. Bonda hills, Belghar. *Hemadri* 3997, *Sharma* 2419. (A2 D2)

Pouzolzia quinquenervis Benn. et Br.

[*P. hirta* (Bl.) Hassk.]

Herb with slender stems. Found in flowering. Balliguda. *Sharma* 3155. (A2 D2)

CASUARINACEAE

Casuarina equisetifolia Linn.

Tree in vegetative condition or in fruiting. Planted in both the districts for its fire wood.

GNETACEAE

Gnetum ula Brongn.

(*G. scandens* Brandis)

V : Lollorimal, Mahulolendi

Large woody climber. Found in fruiting. Bonda hills, Daringbadi. *Hemadri* 3864, *Sharma* 2917. (A1 D2)

CYCADACEAE

Cycas circinalis Linn.

V : Arguna

Palm like Gymnosperm, 1-2 m high. Root and trunk starchy. Leaves pinnately compound with spiny rachis. Found in vegetative condition. Chandrapur; also observed in Boudh, Purana Cuttak and Kalinga ghats. *Hemadri* 3933. (A2 D2)

CUPRESSACEAE

Cupressus sp.

Tree. Planted in Forest Experimental garden, Kalinga. *Narayanappa* 2197 & 2212

PINACEAE

Pinus longifolia Roxb.

Tree in fruiting. Planted by Forest Department at Simanbadi. *Sharma* 2937.

HYDROCHARITACEAE

Hydrilla verticillata (Linn. f.) Royle

Aquatic herb, floating in shallow waters. Leaves whorled. Found in vegetative condition in Mahanadi, Boudh. *Hemadri* 3963 x. (A2 D2)

Ottelia alsimoides (Linn.) Pers.

Aquatic herb rooting at the bottom of the pond. Leaves broad. Flowers white, and fruits with long stalks. Found in both the districts. (A2 D2)

Vallisneria spiralis Linn.

V : Jaburlata

Aquatic herb. Leaves ribbon-like. Found in vegetative condition in shallow water of Mahanadi at Boudh. *Hemadri* 3964 x. (A2 D2)

ORCHIDACEAE

Acampe praemorsa (Roxb.) Blatt. et Mc C.

(*A. wightiana* Lindl.)

Epiphytic orchid growing on Mango trees. Leaves thick, oblong. Flowers sweet scented yellow with purplish transverse bands. Labellum white with rose-red dots. Gupteswar (near Metpad); also observed in Phulbani district. *Hemadri* 3871. (A2 D2)

Aerides ringens (Lindl.) Fisch.

Epiphytic orchid growing on trees. Leaves thick, oblong. Found in flower buds. Gupteswar (near Metpad); also observed in Phulbani district. *Hemadri* 3871 x. (A1 D2)

Eulophia campestris Wall.

Terrestrial orchid with ovoid conical pseudo-bulbs. Flowering scape erect, upto 35cm long. Perianth yellow. Labellum yellow with purple streaks, Sweet scented (at 11.45 hours). Found in forest undergrowth. Chandrapur (near Muniguda).*Hemadri* 3936. (A2 D2)

Geodorum densiflorum (Lamk.) Schltr.

(*G.dilatatum* R.Br.)

Ground orchid with ovoid pseudo-bulbs. Leaves lanceolate, plicate. Found in fruiting. Hathigam. *Narayanappa* 2337. (A2 D3)

Habenaria commelinifolia Wall.

Ground orchid, 45-70 cm tall with leafy stem. Leaves oblong to oblong-lanceolate. Flowers with a long spur. Balliguda Beheda. *Sharma* 3125, *Narayanappa* 2280. (A1 D2)

Habenaria furcifera Lindl.

Ground orchid. Flowers green in lax spikes. Nuagam (near Balliguda). *Sharma* 3073. (A1 D2)

Habenaria goodyeroides D.Don

Ground orchid. Flowers in dense spike. *Sharma* 3059. (A1 D2)

Habenaria plantaginea Lindl.

Ground orchid. Leaves oblong or elliptic-oblong. Flowers in somewhat lax spike. Hathigam. *Narayanappa* 2338. (A2 D2)

Oberonia falconeri Hook.f.

Epiphytic, tiny orchid on tree trunks. Leaves flat, bifarious. Found in fruiting about Gupteswar. (A2 D2)

Fig. No. 27
Eulophia campestris :
Ground orchid found in Chandrapur forests infested with wild elephants

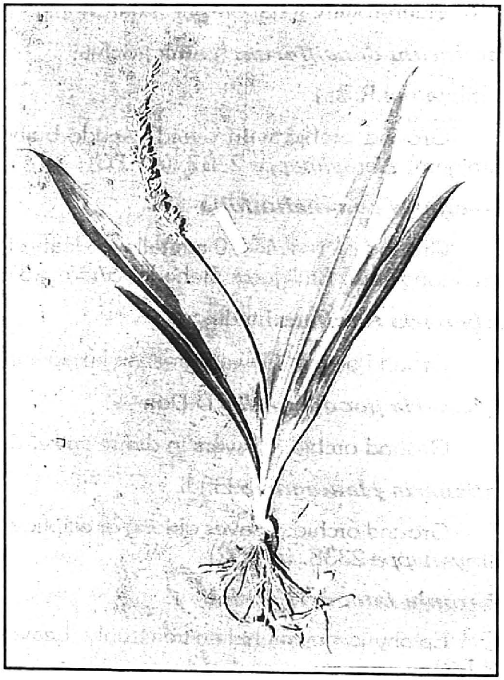


Fig. No. 28
Chlorophytum arundinaceum :
Tubers are a source of `Sweta Musali'

Rhynchostylis retusa (Linn.) Bl.

Epiphytic orchid on trees of *Terminalia bellirica* and *Artocarpus heterophyllus*. Leaves thick, linear-oblong. Flowers rose-coloured on long hanging spikes. Bonda hills. Metpad. Also observed in Phulbani district. *Hemadri* 3861 x & 3887. (A2 D2)

Vanda tessellata Hook.f. ex G. Don

(*V. roxburghii* R.Br.)

S : Rasna ? V : Gotch ranga, Ilkum

Robust, epiphytic orchid on *Madhuca* trees. Leaves thick, very long. Flowers rosy with chocolate reticulations. Chitrakonda - Balimela; also observed in Phulbani district. *Hemadri* 3844. (A3 D3)

Vanda testacea (Lindl.) Reich.f.

(*V. parviflora* Lindl.)

Epiphytic orchid on trees. Found in both the districts. (A2 D2)

COSTACEAE

Costus speciosus (Koen. ex Retz.) Smith

S : Kebuka. V : Gaigobra, Kevukanda

Erect, rhizomatous herb. Flowers white. Found in moist-damp places. Balliguda, Beheda; also observed in Bonda hills. *Sharma* 3009, *Narayanappa* 2317. (A2 D3)

ZINGIBERACEAE

Alpinia calcarata Rosc.

Erect, rhizomatous herb. Leaves linear-lanceolate. Flowers in terminal panicles. Outer perianth yellowish, tubular; inner white; tip spreading, purplish. Anther solitary. Grown in Kalinga and G. Udaigiri. *Hemadri* 3989.

Curcuma amada Roxb.

S : Karpura haridra. V : Amada, Sapta

Erect, rhizomatous herb bearing scape from the centre of the leafy tuft. Flowers white with yellow stamens. Found in moist- damp places. Balliguda. *Sharma* 3003.

Curcuma angustifolia Roxb.

V : Jiguru dumpa (Telugu); Paluva

Erect, rhizomatous herb. Leaves ovate-oblong, sessile. Fresh rhizome somewhat aromatic, bluish-white inside. Rayagada, Gumma; also observed in Phulbani district. *Hemadri* 3916. (A2 D2)

Curcuma longa Linn.

S : Haridra. V : Holdi, Oldi, Kanka

The ' Tumeric', it is cultivated for its rhizomes in many parts of Koraput & Phulbani districts.

Curcuma montana Roxb.

Rhizomatous herb. Common. Beheda. *Narayanappa* 2294. (A3 D3)

Elettaria cardamomum (Linn.) Maton

S : Ela. V : Olayicho

Erect herb in clumps with perennial rhizome. Leaves oblong-lanceolate. Flowering racemes arising from base. Cultivated on experimental basis. Pottangi, Kalinga-G.Udaigiri. *Hemadri* 3810.

Globba marantina Linn.

(*G. bulbifera* Roxb.)

Erect, rhizomatous herb. Flowers yellow. Found as forest undergrowth. Kurtumgarh (near Balliguda), Kotagarh; also observed about Rayagada - Gumma. *Sharma* 3050 & 3102. (A2 D3)

Zingiber capitatum Roxb.

Erect rhizomatous herb upto 75 cm high. Found in flowers buds on heads terminating leafy stems. Kotagarh. *Sharma* 3099. (A2 D2)

Zingiber officinale Rosc.

S : Ardraka, Sunti. V : Adrak

The 'Ginger', it is cultivated for its fresh & dried rhizome, in both the districts.

Zingiber roseum (Roxb.) Rosc.

V : Mahanivaso (Jatapu dialect)

Erect herb in dried up condition. Scape lateral, very short with somewhat capitate spike. Found in the forest undergrowth of both the districts. (A2 D3)

CANNACEAE

Canna indica Linn.

V : Kat Champa

A garden favourite in red or yellowish flowers. Found in both the districts.

MUSACEAE

Musa paradisiaca Linn.

S : Kadali. V : Kodaligatch

The 'Plantain', cultivated for its fruit in both the districts. A couple of dozens of local varieties are grown in the Horticultural Research Station at G. Udaigiri.

BROMELIACEAE

Ananas comosus (Linn.) Merr.

S : Annanas. V : Anasa

The 'Pine Apple', it is grown for its edible multiple fruit, in both the districts.

AMARYLLIDACEAE

Crinum viviparum (Lamk.) Hemadri

(*C. defixum* Ker - Gawl)

Aquatic or water-loving plant with under growth bulb. Leaves linear-oblong. Found in vegetative condition along the Kolab (Sabari) river near Gupteshwar; also in Phulbani district. (A2 D2)

Pancratium triflorum Roxb.

Erect herb with underground bulb. Flowers white, 3 on a scape. Leaves appear after flowering. Found along Chitrakonda - Balimela road; also in Phulbani district. (A2 D2)

HYPOXIDACEAE

Curculigo orchioides Gaertn.

S : Talamuli. V : Talamuli, Kovakonda, Kuthrugulam

Perennial herb. Main root cylindrical, lateral ones fleshy, elongate, tapering at ends. Leaves plicate, lanceolate. Flowers yellow. Fruit green, concealed amidst bracts. Bonda hills, Kalinga - G. Udaigiri, Balliguda. *Hemadri* 3860 & 3972. *Sharma* 2988. (A2 D3)

Taccaceae

Tacca leontopetaloides (Linn.) O. Ktze.

(*T.pinnatifida* Forst.)

Herb in fruiting. Leaves long petioled, 3-partite with each segment pinnatifidly lobed, lobes unequal. Balliguda; also in Koraput district. *Sharma* 3124.(A2 D2)

DIOSCOREACEAE

Dioscorea alata Linn.

V : Kambo alu

Climber, stem winged. Leaves cordate. Cultivated in Bonda hills etc., for its edible tuberous root; also in Phulbani district.

Dioscorea anguina Roxb.

Twiner. Branches pubescent. Leaves broadly ovate, cordate or sub-orbicular, pubescent. Spikes pubescent or tomentose. Hathigam. *Narayanappa* 2351. (A1 D2)

Dioscorea belophylla Voigt

Twiner in flowering. Balliguda. *Sharma* 3025. (A2 D2)

Dioscorea bulbifera Linn.

S : Varahi. V : Cherkonda, Cheranga Kando, Tella, Torigakanda.

Twiner. Leaves sub-orbicular or broadly ovate, usually deeply cordate. Fruit oblong, reflexed, winged. Balliguda, Dabugam. *Sharma* 3158, *Narayanappa* 2396. (A2 D3)

Dioscorea hispida Dennst.

(*D.daemona* Roxb.)

Twiner. Leaves large, 3-foliolate, long petioled. Hathigam. *Narayanappa* 2353. (A2 D2)

Dioscorea oppositifolia Linn.

V : Naarabadlu (Telugu)

Twiner. Leaves oblong to elliptic, all opposite, cuspidate. Spikes dense. Balliguda; also observed about Bonda hills & Rayagada. *Sharma* 3148. (A2 D3)

Dioscorea pentaphylla Linn.

Twiner with 3-5-foliolate leaves. Found in vegetative condition. Barakhambha forest (near Balliguda). *Sharma* 3167. (A2 D3)

STEMONACEAE

Stemona tuberosa Lour.

Twiner. Leaves ovate, cordate. Flowers greenish. Daringbadi. *Sharma* 2935. (A1 D2)

ASPARAGACEAE

Asparagus racemosus Willd.

S : Shatavari. V : Satavari

Scrambling or scandent, perennial shrub with woody, prickly shoots. Cladodes acicular and 3-quetrous. Flowers white. Berries globose, scarlet when ripe. Jhiripani, Katrangia-Gatchapoda (near Phulbani).Beheda. *Sharma* 2463, *Hemadri* 3958, *Narayanappa* 2306. (A2 D3)

LILIACEAE

Chlorophytum arundinaceum Baker

S : Musali (Sweta). V : Phulsag

Erect herb. Roots ending in ellipsoid tubers. Flower buds white. Chandrapur (near Muniguda), Kalinga. *Hemadri* 3940 & 3985. (A2 D3)

Chlorophytum tuberosum (Roxb.) Baker

S : Musali ?

Erect herb with fascicled tuberous roots. Flowers white in lax flowered racemes. Daringbadi, Kurtumgarh (near Balliguda). *Sharma* 2929 & 3065. (A2 D3)

Disporum calcaratum D.Don

Erect herb with perennial root stock. Fruits sub-globose in umbels. Occasional in Chitrakonda forests. (A1 D2)

Gloriosa superba Linn.

S : Langali. V : Gangodahana, Bagnakiphul

Climber with perennial, cormous root stock and annual shoots. Leaves sessile or sub-sessile with circinate tip. Flowers showy, inverted, lower half yellow, upper half red. Nuagam (near Balliguda); also observed in Koraput district, *Sharma* 3045. (A1 D3)

Iphigenia indica (Linn.) Kunth

Erect herb. Leaves few, linear, capsule oblong. Balliguda. *Sharma* 3184. (A1 D2)

Scilla hyacinthina (Roth) Mac Bride

(*S.indica* Baker)

Erect herb with underground bulb. Leaves oblanceolate. Flowers greenish-purple, in receme. Chitrakonda-Balimela; also observed in Phulbani district. *Hemadri* 3838. (A2 D2)

Urginea indica (Roxb.) Kunth

V : Kandei, Bagomundipyaz

Bulbous herb in vegetative condition. Chitrakonda-Balimela road. *Hemadri* 3839.(A2 D3)

SMILACACEAE

Smilax zeylanica Linn.

V : Mootri, Mootrilata

Woody, tendrillar climber with perennial root stock. Fruits globose. Kurtumgarh, Nuagam (near Balliguda), Beheda. *Sharma* 2538, 3053 & 3077, *Narayanappa* 2249. (A2 D2)

AGAVACEAE

Agave americana Linn.

V : Murga

Cultivated in the hill slopes around Koraput for its fibre. Also in Phulbani district.

Aloe barbadensis Mill.

S : Kumari. V : Geevkumari

Planted in gardens and in the back-yards for its medicinal fleshy leaf. Found in both the districts.

Sansevieria roxburghiana Schult.f.

S : Murva ? V : Murga

Perennial herb in vegetative condition. Leaves thick, flat and elongate. Found about Munigada. (A2 D2)

COMMELINACEAE

Commelina atttenuata Koen. ex Vahl

Diffuse herb. Flowers blue. Found in wet places. Balliguda. *Sharma* 3185. (A2 D2)

Commelina benghalensis Linn.

V : Kennasuri sag

Herb with ascending branches and cleistogamous flowers. Found in moist, waste places around Rayagada. Common in both the districts. (A3 D3)

Commelina suffruticosa Bl.

Scrambling herb in fruiting. Kurtumgarh (near Balliguda). *Sharma* 3051. (A2 D2)

Cyanotis adscendens Dalz.

[*C.tuberosa* (Roxb.) Schult. var. *adscendens* C.B.Cl.]

Herb in flowering. Balliguda, Beheda. *Sharma* 3180, *Narayanappa* 2261. (A2 D3)

Floscopa scandens Lour.

Erect herb. Leaf sheaths hirsute or bearded. Leaves sessile, elliptic-lanceolate. Capsule subglobose, in dense terminal panicles. Kotagarh. *Sharma* 2529. (A1 D2)

Murdannia nudiflora (Linn.) Brenan

Small herb with slender branches decumbent & rooting or ascending. Leaves linear or linear-lanceolate. Fruit oblong-ellipsoid. Balliguda. *Sharma* 3186. (A2 D3)

Murdannia scapiflora (Roxb.) Royle

Erect annual herb in moist situations. Flowers bluish-pink. Found on way to Gurupriyo river from Chitrakonda. (A2 D2)

ARECACEAE

Borassus flabellifer Linn.

S : Tala. V : Thaalo gatcho; Taadi (Telugu)

The 'Palmyrah palm', found in flowering and fruiting (dioecious), in both the districts. (May-June). (A4 D3)

Caryota urens Linn.

V : Salap, Salpo gatcho, Solapo

Tall plam with large compound leaves. Found in vegetative condition or in flowers & fruits, throughout Koraput & Phulbani districts. A sour & sweet toddy is tapped from the tender female spadix. (A2 D3)

Cocos nucifera Linn.

S : Narikela. V : Nodia, Kobbari (Telugu)

The ' Coconut', often grown in both the districts.

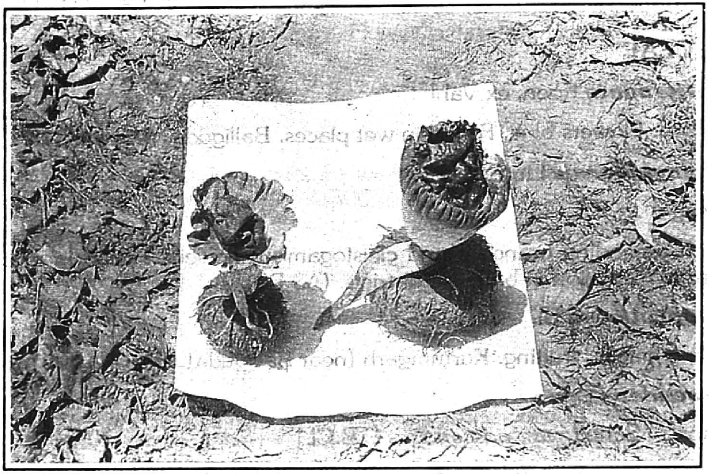


Fig. No. 29

Amorphophallus paeoniifolius :
An interesting Phyto-Geographical record

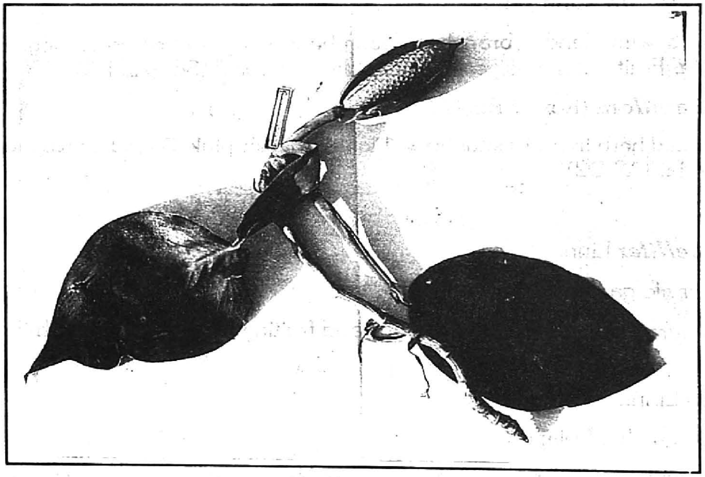


Fig. No. 30

Scindapsus officinalis :
The officinal `Gajapippali'?

Phoenix acaulis Roxb. ex Buch.- Ham.

V : Bhuin Khajuri, Khajori Kanda

Small palm with very short stem and many compound leaves giving a bushy appearance. Fruits yellow, sub-globose, ellipsoid, black at maturity. Chandrapur (near Muniguda); observed throughout both the districts. *Hemadri* 3937. (A3 D3)

Phoenix sylvestris (Linn.) Roxb.

V : Khajori, Sindhi; Yeeta (Telugu)

Tall palm with pinnately compound leaves. Fruits oblong-ellipsoid, yellow, turning to yellowish brown at maturity. Common throughout Koraput & Phulbani districts. (A3 D3)

PANDANACEAE

Pandanus fascicularis Lamk.

(*P. odoratissimus* Linn.f. & *P. tectorius* Soland.ex Parkinson)

S : Ketaki . V : Kiya phula

Profusely branched shrub with many adventitious roots supporting the branches. Leaves linear-oblong, spiny along the margin. Found in vegetative condition. Ladda (near Rayagada);also observed in Phulbani district. *Hemadri* 3906. (A3 D2)

TYPHACEAE

Typha angustata Bory et Chaub.

S : Gundra

Aquatic or water-loving herb. Leaves linear, flat. Frequently found in vegetative condition or in drying spikes (May-June) in both the districts. (A3 D2)

ARACEAE

Amorphophallus paeoniifolius (Dennstedt.) Nicolson

(*Amorphophallus rex* Prain ex Hook.f.)

V : Bono ulo, Suruni Kanda, Surun Kanda; Duladumpa (Telugu)

Herb with large, dorsally compressed tuberous root. Lateral roots often ending in small tubers. Inflorescense shortly stalked. Spathe campanulate, undulate, vinaceous purple; spadix with club shaped, barren appendage, vinaceous purple, fibrous. Male flowers yellow, arranged below the pale-pink female flowers, emitting foul smell throughout the day. Dudhbeda (near Metpad); also observed in Phulbani district. *Hemadri* 3878. (A2 D2)

This is a new record for Orissa, extending its distribution fruther North along the Eastern ghats.

Arisaema tortuosum (Wall.) Schott

Tuberous herb in flowering. Balliguda. *Sharma* 3008. (A1 D2)

Colocasia esculenta (Linn.) Schott

S : Kaachu. V : Hopeli, Saaru, Jongal saaru

Aquatic or marshy plant with cordate leaves. Found in vegetative condition along the streams; also cultivated for its tuber in both the districts.

Cryptocoryne retrospiralis Fisch. ex Wydler

Aquatic or water-loving perennial herb. Leaves linear-oblong. Found in vegetative condition at the ledge of Kolab (Sabari) river near Gupteshwar; also found in Phulbani district. (A3 D2)

Lasia spinosa (Linn.) Thu.

V : Kanta saru

Prickly herb with thick rhizomes. Leaves hastate, pinnatifid, nerves prickly. Petiole prickly. Found in vegetative condition along streams & nalas. Belghar. *Sharma* 2420. (A2 D2)

Pistia stratiotes Linn.

S : Jalakumbhi

Aquatic herb, floating on water with a rosette of obovate-cuneate leaves. Leaf itching on chewing. Found in vegetative condition in water ponds near Metpad, Thumuribanda and Phulbani. (A3 D2)

Scindapsus officinalis Schott

S : Gajapippali

Large perennial climber, also epiphytic on trees. Leaves ovate. Spadix entirely covered by green spathe. Ranipathar (near Phulbani). *Hemadri* 3960. (A1 D2)

POTAMOGETONACEAE

Potamogeton indicus Roxb.

Aquatic herb. Leaves long-petioled, lamina ovate-oblong. Found in vegetative condition in shallow waters of Mahanadi (May-June) Boudh. *Hemadri* 3961x. (A2 D2)

NAJADACEAE

Najas minor (Pers.) All.

Aquatic, submerged herb, dark green in colour. Flowering spathe white. Found in shallow waters of Mahanadi. Boudh. *Hemadri* 3968 x. (A3 D2)

ERIOCAULACEAE

Eriocaulon cinereum R.Br.

(*E.sieboldianum* Sieb. & Zucc. ex Steud.)

Small, annual herb in fruiting. Leaves radical, subulate or setaceous. Heads globose or ovoid. *Sharma* 2489. (A2 D2)

CYPERACEAE

Bulbostylis barbata (Rottb.) Clarke

Tufted, small sedge. Glumes cymbiform. Balliguda. *Sharma* 3177. (A2 D3)

Cyperus exaltatus Retz.

V : Bhotha

Erect sedge. Flowers in compound umbels, terminating in numerous spikes. Beheda. *Narayanappa* 2301. (A3 D3)

Cyperus niveus Retz.

Erect sedge. Spikelets arranged in a terminal head. Balliguda. *Sharma* 3178. (A2 D3)

Cyperus rotundus Linn.

S : Musta. V : Motha ghas, Mutha

Erect sedge in vegetative condition or in young spikes. Root ending in tubers. Pottangi (near Koraput); observed throughout both the districts. *Hemadri* 3808. (A3 D3)

Fimbristylis bisumbellata (Forsk.) Bub.

Tufted, annual sedge in flowering and fruiting spikes. Found in moist situations about Boudh; also in Koraput district. (A3 D2)

Fimbristylis dichotoma (Linn.) Vahl

Erect, tufted annual sedge in ovoid spikes. Found in moist situations in both the districts. (A2 D2)

Fimbristylis miliacea (Linn.) Vahl

A sedge in fruiting. Beheda. *Narayanappa* 2304. (A2 D2)

Fimbristylis tetragona R.Br.

Erect sedge. Stem terminated by a large, conical spike. Beheda. *Narayanappa* 2305. (A2 D3)

Scirpus grossus Linn.f.

S : Kaseruka. V : Kesur konda

Aquatic sedge. Roots ending in sub-globose tubers. Found in vegetative condition about Umerkote. (A2 D2)

POACEAE

Apocopis paleacea (Trin.) Hochr.

Tufted grass in terminal brownish spikes. Found in Koraput district. (A2 D2)

Bothriochloa glabra (Roxb.) A. Camus

Erect, tufted grass. Spikes terminal, aromatic. Few, found in Koraput district. (A2 D2)

Centotheca lappacea (Linn.) Desv.

About 20 cm tall grass found in fruiting. Kotagarh. *Sharma* 2521. (A2 D2)

Chionachne koenigii (Spr.) Thw.

V : Gargar

Erect grass upto 1.5 m tall. Found in fruiting. Kotagarh. *Sharma* 2488. (A2 D3)

Chrysopogon serrulatus Trin.

A grass in fruiting. Frequent. Hathigam. *Narayanappa* 2346. (A3 D3)

Cynodon dactylon (Linn.) Pers.

S : Durva. V : Dubbo ghas

A weak grass rooting at nodes. Spikes terminal, 4-5 digitate. Kalimela; observed throughout both the districts. *Hemadri* 3826. (A4 D3)

Digitaria griffithii (Hook.f.) Henr.

Erect grass. Spikes corymbose-subumbellate, 4-5 in number. Found in the undergrowth. Pottangi. *Hemadri* 3991. (A2 D2)

Echinochloa crusgalli (Linn.) P. Beauv.

A grass with awned spikelets. Beheda. *Narayanappa* 2302. (A3 D2)

Eleusine coracana (Linn.) Gaertn.

S : Makara. V : Mandia

Tufted, erect grass. Spikes terminal, digitate. Cultivated. Pottangi; also observed in Phulbani district. *Hemadri* 3803.

Eleusine indica (Linn.) Gaertn.

Perennial erect grass in digitate spikes. Frequently found as a weed in waste places in both the districts. (A2 D3)

Eragrostis ciliata (Roxb.) Nees

Small grass found in fruiting. Kotagarh. *Sharma* 2508. (A3 D3)

Heteropogon contortus (Linn.) P. Beauv.

V : Sinkulia

Erect grass in drying condition. Spikes terminal with dark brownish-black, long twisted awns. Common in both the districts. (A3 D3)

Imperata cylindrica (Linn.) P. Beauv.

V : Dabba pari

Perennial grass, 0.3-1.5 m tall. Leaves linear. Spikes terminal, long, white, silky hairy. Chitrakonda; also observed throughout both the districts. *Hemadri* 3836. (A3 D3)

Ischaemum duthiei Staff ex Bor

Perennial, tufted grass in terminal drying spikes. Infrequently found in Koraput district. (A2 D2)

Oplismenus burmanni (Retz.) P. Beauv.

Spreading, coarse grass with ascending culms in flowering and fruiting panicles. Found as a weed in the forest undergrowth about Rayagada; also in Phulbani district. (A3 D3)

Oplismenus compositus (Linn.) P. Beauv.

Spreading, coarse grass with ascending culms in flowering and fruiting panicles. Abundantly found as a weed in the forest undergrowth about Rayagada; also in Phulbani district. A3 D3

Oryza granulata Nees et Arn. ex Steud.

Erect, tufted, perennial grass in terminal, green panicles. Found in forest undergrowth. Gumma- Kumbhikota (near Rayagada). *Hemadri* 3919. (A2 D2)

Oryza sativa Linn.

S : Shali. V : Dhano

The 'Paddy'. cultivated in both the districts, including the plateau of Bonda hills.

Pennisetum hohenackeri Hochst. ex Steud.

Tufted, perennial coarse grass in terminal spikes. Found about Umerkote. (A2 D2)

Saccharum officinarum Linn.

S : Ikshu. V : Akhu, Danda

The 'Sugar cane', cultivated in both the districts.

Saccharum spontaneum Linn.

S : Kasa· V : Bhaya danda, Kasi

Erect, tall, perennial grass in flowering & fruiting. Kotagarh; also observed in Bonda hills. *Sharma* 3105. (A2 D3)

Setaria glauca Beauv.

V : Kukru

Tufted grass. Leaves narrow, flat. Spikelets with barbellate bristles. Kotagarh. *Sharma* 3109. (A2 D3)

Sorghum vulgare (Linn.) Pers.

V : Jowar

The 'Pearl millet', cultivated for its edible grain in both the districts.

Thysanolaena maxima (Roxb.) O. Ktze.

V : Phulbahari, Phulbadhuri, Phulochanchuni; Cheepur (Telugu)

Perennial, tufted, tall grass in flowering. Belghar; also observed in other areas of both the districts. *Sharma* 2415. (A3 D3)

Vetiveria zizaniodes (Linn.) Nash

S : Ushira. V : Gura gaddi, Guyil gaddi (Koya dialect).

Tufted, perennial grass in vegetative condition. Found about streams in Koraput districts. (A2 D3)

Zea mays Linn.

S : Sikhalu. V : Jonnapothu (Telugu)

The 'Maize', cultivated for its edible grain, in both the districts.

BAMBUSACEAE

Bambusa arundinacea (Retz.) Willd.

(*B.bambos* Druce)

S : Vansha. V : Bans

The 'Bamboo' with thorny culms. Common, found in vegetative condition in both the districts. (A3 D3)

Dendrocalamus strictus (Roxb.) Nees

S : Vansha. V : Bans

The 'Male bamboo' with non spiny culms. Common, found in vegetative condition in both the districts. (A3 D3)

Pteridophyta

ADIANTACEAE

Adiantum incisum Forsk.

Fronds hairy, pinnate; in fructification. Found along the banks of Vamsadhara, Rayagada, Panimunda (near Munigada). *Hemadri* 3901x & 3932 x. (A3 D2)

Adiantum lunulatum Burm.f.

S : Hansapadi. V : Behandal, Mayurachulia

Fronds glabrous, shining, pinnate; pinnae orbicular or elliptic-oblong. Sori marginal.Found in wet-damp places. Bonda hills, Kalinga- G.Udaigiri, Balliguda. *Hemadri* 3863 & 3973, *Sharma* 2991. (A2 D3)

Diplazium esculentum (Retz.) Sw.

V : Kukari sag

About 30 cm tall fern. Fronds bipinnate, in vegetative condition. Belghar. *Sharma* 2411. (A2 D2)

Pteris pellucida Presl.

About 45 cm tall fern. Fronds pinnate, in fructification. Belghar. *Sharma* 2409. (A2 D2)

MARSILEACEAE

Marsilea minuta Linn. ·

S : Sunishannaka. V : Chunia sag

Aquatic herb. Frond 4-fid. Found in fructification. Panimunda (near Muniguda), Beheda; also observed in Phulbani district. *Hemadri* 3932, *Narayanappa* 2271. (A3 D3)

SCHIZAEACEAE

Lygodium flexuosum (Linn.) Sw.

V : Mahajal, Mayajal

A climbing fern in fructification. G.Udaigiri, Kurtumgarh (near Balliguda); also observed in Koraput district. *Hemadri* 3987 x, *Sharma* 2543 & 3049. (A2 D3)

THELYPTERIDACEAE

Ampelopteris prolifera (Retz.) Copel.

Tufted, erect fern in pinnate, vegetative fronds. Nakadisaroo (near Phulbani). *Hemadri* 3959x. (A2 D2)

Christella dentata (Forsk.) Holtt.

Tufted perennial fern. Fronds pinnate with brown sori. Bonda hills. *Hemadri* 3859. (A2 D2)

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CHAPTER - III

FOLK - LORE CLAIMS

i) Enumeration of plants used in Tribal Medicine and as food items:

L : ***Abelmoschus crinitus*** Wall. F: MALVACEAE

V : Bondki phul

P : Gurupriyo, near Chitrakonda, Koraput district.

Fresh root is edible.

L : ***Abrus precatorius*** Linn. F: MALVACEAE

V : Tella Guriginja, Tella Gurivinda (a-d); Guriginja (e) (a-e : Telugu) S: Gunja (Sweta)

P : Manyam konda near Kalimela, Koraput district (a); Chaitrakonda, Koraput district (b-d); Gupteswar near Metpad, Koraput district (e).

a) Leaf is made into powder mixed in sugar and taken internally in Leucorrhoea and Menorrhagia (Sweta & Rakta pradara).

b) Two seeds of `Gunja' (white variety) are soaked over night in 20ml of water and are swallowed along with the water on empy stomach by women on the 4th day of menstruation to avoid conception for two years. (Experienced by the Forest Range Officer, Chitrakonda).

c) 1 1/2, 2 1/2, 3 1/2, 4 1/2, & 5 1/2 dehusked seeds of `White Gunja' are taken on 3rd, 4th, 5th, 6th and 7th day respectively after menstruation to attain permanent sterility.

d) Stem of white variety is made into a talisman and worn around the upper arm to ward off evil spirits.

e) Seeds are powdered, mixed in jaggery and given internally for two days to terminate pregnancy.

L : ***Acacia leucophlcea*** (Roxb.) Willd. F : MIMOSACEAE

V : Gohira (Gondi dialect) S : Arimeda, Irimeda

P : Jhorigaon near Umerkote, Koraput district.

Fresh root paste is mixed in milk and given to terminate pregnancy. The abortion, it is said, takes place within two days. Dose : 20g of root paste in a cup of milk. Suagr is added to taste.

Note : The root emits very offensive smell.

L : **Acacia sinuata** (Lour.) Merr. F : MIMOSACEAE

(*Acacia concinna* DC.)

V : Chilli S : Saptala

P : Metpad, Koraput district

Leaf is prepared into `Rasam' (Soup) and consumed by local people for its Laxative properties.

L : ***Acacia torta*** (Roxb.) Craib F : MIMOSACEAE

V : Bona chilli

P : Balimela village, Koraput district.

Leaf is made into paste, applied to head and taken bath after half an hour to relieve head ache.

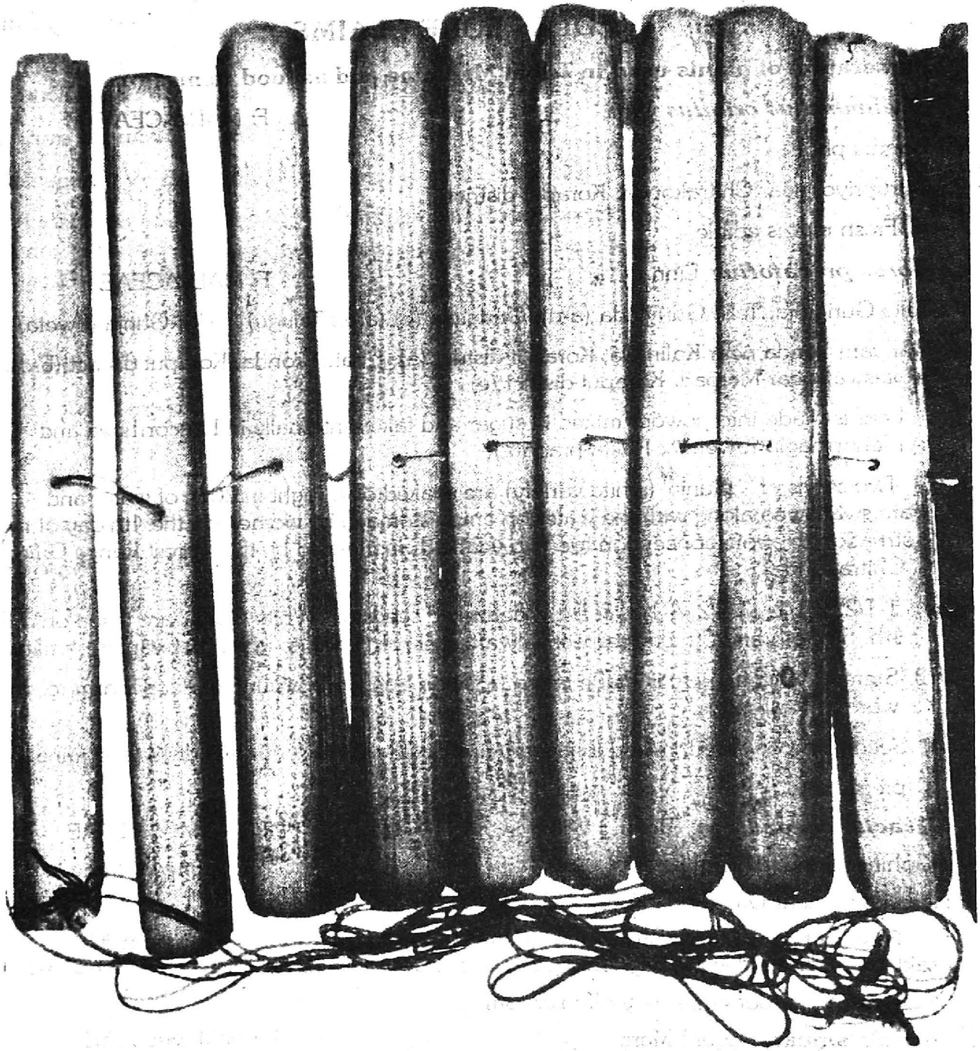

Fig. No.31
Traditional Medicine recorded on Palm leaves :
Shri Narendra Pradhan of Gurupodo village near Phulbani,
is the proud owner of this `Talapatra Granth'.

L : ***Acalypha indica*** Linn. F : EUPHORBIACEAE

V : Mochidaal, Mochi saag S : Harinmanjari

P : Sheravali - Panimunda near Muniguda, Koraput district.

Leaf is eaten as vegetable, for its laxative properties.

L : ***Achyranthes aspera*** Linn. F : AMARANTHACEAE

V : Dubbina chettu, Uthareni (Telugu) (a); Ducha bondro, Rucha bondro(b) (Kuvi or Jatapu dialect); Dhatrikota, Opamaarga (c); Apamarga (d). S : Apamarga

P : Podia near Kalimela, Koraput district (a), Ladda near Rayagada, Koraput district (b), Panimunda near Muniguda, Koraput district (c); Kurtumgarh near Balliguda, Phulbani district (d).

a) Root together with some salt is made into a paste and applied to the caries tooth for relief.

b) In delayed delivery, water extract of root is given internally to hasten the delivery. It is claimed that delivery takes place within half an hour of its administration. Dose :10 ml.

c) Water extract of root and black pepper is given internally in Diarrhoea.

Dose : 10 g of root and 2-3 numbers of black pepper.

d) Root of *Achyranthes aspera* and *Elephantopus scaber*, are pounded and administered internally to women to help conception, (*Sharma* 2899).

L : ***Aegle marmelos*** (Linn.) Corr. F : RUTACEAE

V : Bel (a); Bello (b) S : Bilva

P : Kutragada - Kusumgudi near Muniguda, Koraput district (a); Phulbani, Phulbani district (b)

a) A mixture of water extracts made of very young fruit of *Aegle marmelos*, flowers of *Woodfordia fruticosa* (V : Dhaatuki) and root of *Holarrhena antidysenterica* (V : Kudayi) together with some sugar candy or honey is given in 'Raktatisara' (Dysentery).

Dose : 10-15 ml.

b) Juice of 7 leaves is given daily internally on empty stomach in Diabetes mellitus.

L : ***Aerva lanata*** (Linn.) Juss. F : AMARANTHACEAE

V : Sanna Sondo S : Pashana bheda ?

P : Gurupriyo near Chitrakonda, Koraput district.

Fresh or dried root is tied around wrist or worn as pendant by patients suffering from fever and heaviness in head.

L : ***Ageratum conyzoides*** Linn. F : ASTERACEAE

V : Kupsunga (a & b)

P : Chandrapur, off Muniguda, Koraput district (a); Phiringia near Phulbani, Phulbani district (b)

a) Root is ground into paste with a few drops of mother's milk and given to children suffering from Diarrhoea. Dose : 2-4 g.

b) Leaf paste is applied all over the body to ward off ticks infecting the cattle.

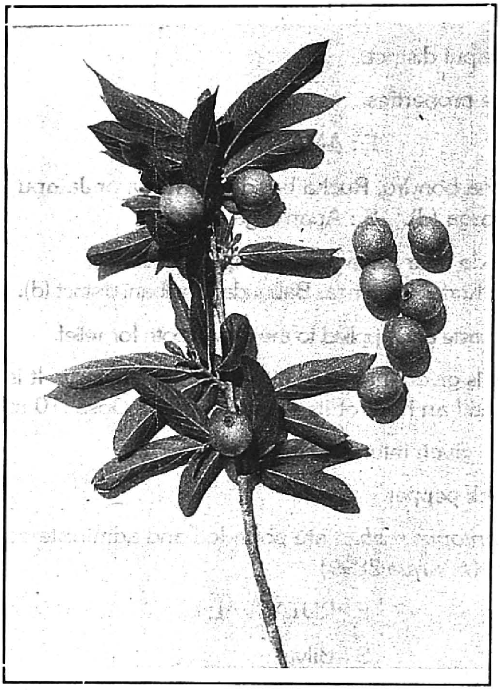

Fig. No. 32

Alangium salviifolium :
Fruit pulp prevents Conjunctivitis

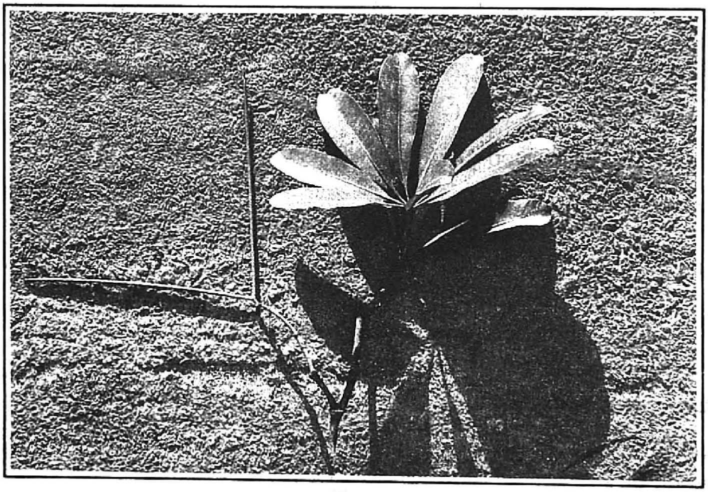

Fig. No. 33

Alstonia scholaris :
Stem bark alleviates Rheumatic pains

L : ***Alangium salviifolium*** (Linn.f.) Wang. F : ALANGIACEAE

V : Ankul (a & b), Ankulo (c) S : Ankola

P : Kalimela, Koraput district(a); Muniguda, Koraput district (b); Kutragada - Kusumgudi near Muniguda, Koraput district (c)

a) Ripe fruit is eaten as a preventive measure for Conjunctivitis. It is also belived that one fruit prevents Conjunctivitis for one year; two for two years and so on and so forth (*Hemadri* 3814).

b) Extract of stem bark is given in ordinary fever. Dose : 5 ml twice a day.

c) Extract of stem bark is given to children to ward off evil spirits and convulsions ('Apasmara').

L : ***Aloe barbadensis*** Mill. F : AGAVACEAE

V : Geevkumaari S : Kumari

P : Muniguda, Koraput district.

Fleshy leaf juice is applied to head in head-ache.

L : ***Alstonia scholaris*** R. Br F : APOCYNACEAE

V : Taalamraanu (a); Satyana,Chochina (b). S : Saptaparna

P : Ladda near Rayagada, Koraput district (a); Kalinga - G. Udayagiri, Phulbani district (b)

a) A fomentation given with water extract made of leaf of *Vitex negundo* (V : Vaayi) and stem bark of *Alstonia scholaris* relieves Rheumatic pains.

b) Stem bark is boiled in Goat's milk and the decoction thus obtained is given internally in Rheumatic pains.

Dose : 20 ml of decoction made of 10g of stem bark and 40 ml goat milk.

L : ***Alternanthera pungens*** H.B.K. F : AMARANTHACEAE

V : Rose guttho

P : Chitrakonda, Koraput district

Juice of leaf is applied to fore-head in head-ache.

L : ***Amaranthus spinosus*** Linn. F : AMARANTHACEAE

V : Konta Koda (a), Kanta mariso (b) S : Tanduleeya

P : Pottangi near Koraput, Koraput district (a) and Daringbadi, Phulbani district (b)

Leaf is eaten as vegetable (*Sharma* 2951).

L : ***Amaranthus viridis*** Linn. F : AMARANTHACEAE

V : Baraamasi saag

P : Rayagada, Koraput district

Leaf is eaten as vegetable (*Hemadri* 3925).

L : ***Amorphophallus paeoniifolius*** (Dennestedt.) Nicolson F: ARACEAE

(*Amorphophallus rex* Prain et Hook. f.)

V : Surum kanda (a); Dula dumpa (b) (Telugu); Bono ulo (c)

P : Ramgiri near Metpad, Koraput district (a); Ladda near Rayagada; Koraput district (b); Gumma- Lakshmipur road near Rayagada, Koraput district (c)

a) Tuber is made into a paste and applied to putrified wounds of cattle (*Hemadri* 3878).

b) Paste made of stem barks of *Grewia tiliifolia* (V : Dhaman) and *Helicteres isora* (V:Kappeli) together with tuber of *Amorphophallus* is applied externally and bandaged for bonesetting.

c) Tuber and tender leaf are eaten as vegetable.

Note : Jaggery and tamarind are used to remove the itching properties.

L : ***Ampelocissus tomentosa*** (Heyne ex Roth) Planch. F : VITACEAE

V : Bono Kumda (a); Devunimal (b) (Bonda dialect)

P : Chitrakonda, Koraput distrtict (a); Bonda hills, Koraput district (b).

a) Tuberous root is made into paste and used as external application in Scabies.

b) Tuberous root is made into paste and applied over the wounds due to cuts etc.

L : ***Andrographis paniculata*** (Burm.f.)Wall. ex Nees F : ACANTHACEAE

V : Bhuyi numb (a & b) S : Bhunimba

P : Chitra konda, Koraput district (a); Kalinga-G.Udayagiri, Phulbani district (b).

a) Leaf is made into paste and applied externally in Itching and Eczema. Also given internally. Dose : 2-5 g once a day internally.

b) Root and stem along with 7 grains of mustard are made into a paste mixed in mother's milk and given to children to kill intestinal worms. Dose : 2-5 g.

L : ***Annona squamosa*** Linn. F : ANNONACEAE

V : Sitaphal (a & b) S : Sitaphala

P : Gumma - Lakshmipur Road near Rayagada, Koraput district (a); Phirangia near Phulbani, Phulbani district (b)

a) Leaf paste is applied to wound sores of cattle.

b) Leaf is pounded, warmed, wrapped in a cloth and given fomentation around 'Raktajapidika' (abscess) to burst open it within a day. Similar treatment is given to relieve sprains also.

L : ***Antidesma diandrum*** (Roxb.) Heyne ex Roth F : EUPHORBIACEAE

V : Sardikusa

P : Daringbadi, Phulbani district.

Leaves are eaten as vegetable (*Sharma* 2960).

L : ***Antidesma ghesaembilla*** Gaertn. F : EUPHORBIACEAE

V : Noniari, Jamrudi

P : Balliguda, Phulbani district

Fruits are eaten (*Sharma* 3002).

L : ***Ardisia solanacea*** (Poir.) Roxb. F : MYRSINACEAE

V : Kunti gatcho (a & b); Batguri, Putupatra (c)

P : Chitra konda, Koraput district (a); Gupteswar Koraput district (b); Balliguda, Phulbani district (c)

a) Fruit is eaten in Conjunctivitis (*Hemadri* 3831).

b) Ripe fruit juice is used as eye drops in Conjunctivitis.

c) Leaves, while preparing 'Mahuli' liquor with flowers of *Madhuca longifolia* var. *latifolia* are added to it to increase intoxicating property. (*Sharma* 2888).

L : ***Argemone maxicana*** Linn. F : PAPAVERACEAE

V : Morati (a); Kheera konta (b) S : Swarna kshiri

P : Ramgiri near Metpad, Koraput district (a); Sharavali Panimunda near Muniguda, Koraput district (b).

a) A paste made of *Argemone* seeds and turmeric is applied externally in Eczema.

b) Oil obtained from seeds is used for burning lamps.

Note : It is claimed that whole body and head would swell abnormally if the oil is applied to the body and head

L : ***Artocarpus heterophyllus*** Lamk. F : MORACEAE

V : Panaso S : Panasa

P : Karagaon near Umerkote, Koraput district.

Dried stem bark together with some pepper and a few drops of water is ground well into a paste and applied to the body in Eczema.

L : ***Artocarpus lacucha*** Buch.- Ham. F : MORACEAE

V : Jevuto S : Lakucha

P : Gurupoda, Phulbani district.

Ripe fruit which is sweet & sour to taste is edible (*Hemadri* 3949).

L : ***Asparagus racemosus*** Willd. F : ASPARAGACEAE

V : Devbadni (a-d); Panna oyido (e) S : Satavari

P : Chitrakonda, Koraput district (a & b) ; Bonda hills, Koraput district (c); Jhorigaon near Umerkote, Koraput district (d) : Kalinga-G.Udayagiri, Phulbani district. (e).

a) Tuber is pounded along with some salt and eaten to relieve throat pain.

b) Fresh tuber is soaked overnight in water and eaten in the morning as a cooling agent.

c) Juice of tuber is given internally to relieve head-ache and Virtigo due to vitiated 'Pitha'. Alternatively dried root is chewed and the juice thus obtained is swallowed.

Dose : Juice 20 ml.

d) Juice of tuberous root together with sugar is given internally in Leucorrhoea ('Sweta pradara'). Altrernatively, some Ragi floor (V : Mandia; L : *Eleusine coracana)* is added into the above juice, kept over night and given internally.

e) Tuber along with some mustard is made into a paste and applied to head with boils or pustules for healing.

L : ***Azadirachta indica*** A . Juss. F : MELIACEAE

V : Limbo gatcho S : Nimba

P : Gumma-Lakshmipur Road near Rayagada, Koraput district.

Decoction of tender leaves and flowers is given in stomach ache due to intestinal worms or in case of pain due to indigestion.

L : ***Baliospermum montanum*** (Willd.) Muell.-Arg. F : EUPHORBIACEAE

V : Dumbo joda S : Danti

P : Chitrakonda - Sileru Road, Koraput district.

Leaf juice is applied to fore-head in head-ache.

L : ***Barleria prionitis*** Linn. F : ACANTHACEA

V : Das Karanta (Koya dialect.) S : Sahachara

P : Kalimela, Koraput district.

Leaf of *Barleria prionitis* (300 g) together with 100 g of dried ginger (L : *Zingiber officinale,* V : Sonti; S : Sushkardrada), 100 g of *Hyoscyamus niger* Linn. V : Javaani) and 100g of pepper (L : *Piper nigrum*) and some Rock salt (S: Saindhava lavana) is made into a powder and given on empty stomach in general ailments and as blood purifying agent.

The above powder is also said to be effective in initial stage of Diabetes mellitus.

Dose : 10 g for 30 days (after meals).

Note : During the treatment the patient should take first four morsels of food (rice) wth a powder made of Bengal gram (L : *Cicer arietinum,* S : Canaka).

L : ***Barringtonia acutangula*** (Linn.) Gaertn. F : BARRINGTONIACEAE

V : Dimbari, Hinjala (a), Hinjal (b) S : Nicula

P : Gupteswar near Metpad, Koraput district (a); Kutragada-Kusumgudi near Muniguda, Koraput district (b)

a) Root is tied around wrist to subside 'Palijwara' (Intermittent fever) (*Hemadri* 3869)..

b) Water extract of stem bark is given in Dysentery. Dose : 5 ml.

L : ***Bauhinia purpurea*** Linn. F : CAESALPINIACEAE

V : Boreda, Borodo, Kuneri (Gondi dialect) S : Vanaraja

P : Old Balimela village & Yakkamba village near Umerkote, Koraput district.

Tender leaf is eaten as vegetable.

Note : Leaf is slimy and tasteless on chewing. Sold in the village shandy.

L : ***Bauhinia racemosa*** Lamk. F : CAESALPINIACEAE

V : Konchana, Dondra

P : Balliguda, Phulbani district.

Flowers are made into chutney and eaten.

L : ***Bauhinia vahlii*** Wt. et Arn. F : FABACEAE

V : Siali

P : Balliguda, Phulbani district.

Seeds are roasted and eaten (*Sharma* 2873).

L : ***Borassus flabellifer*** Linn. F : ARECACEAE

V : Thalogatcho S : Tala

P : Manyam konda near Kalimela, Koraput district.

Water extract obtained from equal quantities of *Borassus* root and whole plant of *Sphaeranthus indicus* (V : Bodasaram; S : Munditaka) is given internally in back ache and other Rheumatic pains. Dose : 10-20 ml.

L : ***Benincasa hispida*** (Thunb.) Cogn. F : CUCURBITACEAE

V : Kokharu S : Kushmanda

P : Nakadisaroo on way to Gatchapoda, Phulbani district.

Fruit juice together with sugar is given in Jaundice (V : Pitha kamala).

Dose : 5 ml once a day.

L : ***Blepharispermum subsessile*** DC. F : ASTERACEAE

V : Rasna jadi (Gondi dialect)

P : Burja village near Umerkote, Koraput district.

Root juice is given in Rheumatoid arthritis.

Dose : 10ml once a day (*Hemadri* 3806)

L : ***Boerhaavia diffusa*** Linn. F: NYCTAGINACEAE

V : Kopra saagu S : Punarnava

P : Gumma-Lakshmipur Road near Rayagada, Koraput district.

Leaf is eaten as vegetable for its diuretic properties.

L : ***Bombax ceiba*** Linn. F : BOMBACACEAE

V : Semuli S : Shalmali

P : Nakadisaroo on way to Gatchapoda, Phulbani district.

Root paste of a sapling is applied around the abscess to burst open within a night.

L : ***Borreria articularis*** (Linn.f.) F. N. Will. F : RUBIACEAE

V : Sollo gonti S : Madanaghanti

P : Gurupriyo near Chitrakonda, Koraput district.

In delayed delivery, one root is inserted into the ear of the patient due to which it is believed, delivery occurs within 20-25 minutes. The root is removed from the ear soon after its purpose is served.

L : ***Bryophyllum pinnatum*** (Lamk.) Oken F : CRASSULACEAE

V : Basum gatch (Bonda dialect) S : Patrabija

P : Bonda hills, Koraput district.

Fresh leaf paste is applied over the stomach (belly) to relieve abdominal pain due to indigestion.

L : ***Buchanania lanzan*** Spreng. F : ANACARDIACEAE

V : Chaarkoli S : Priyala

P : Kuduk village near Umerkote, Koraput district.

Inner stem bark is pounded, mixed in water and kept for a while. A red coloured extract thus obtained is boiled till it turns into a sticky paste which is applied to burns for healing.

L : ***Butea monosperma*** (Lamk.) Taub. F : FABACEAE

V : Polosa S : Palasha

P : Gurupoda near Phulbani, Phulbani district.

Seed is made into a paste, mixed in honey and applied inside the vagina from 5th day of menstruation for seven days to act as contraceptive effective for one month.

L : ***Cajanus cajan*** (Linn.) Millsp. F : FABACEAE

V : Arhar; Kandool (Telugu) S : Adhaki

P : Boudh, Phulbani district.

Leaf juice is mixed in honey and given thrice a day internally as a cure for Jaundice.

L : ***Calotropis gigantea*** (Linn.) R.Br. F : ASCLEPIADACEAE

V : Arkopathra, Arakho gatch (a-f) S : Arka

P : Chitrakonda, Koraput district (a); Ramgiri - Gupteshwar near Metpad, Koraput district (b-d); Kutragada - Kusumgudi near Muniguda, Koraput district (e & f).

a) Milky latex is applied externally in case of pain in side ribs.

b) In the cases of delayed puberty, a leaf coated with castor oil is warmed and tied over the female genital with a cloth and kept overnight. This is repeated for 5 to 10 times till the menstruation takes place.

c) Latex is applied externally as an antidote for snake-bite.

d) In 'Arthavabheda sirassula' (Migraine) the temporal part is priked with a clean needle so that some blood oozes out and then the milky latex of the plant is applied on it to relieve pain within 15 minutes.

e) The milky latex is applied externally in cases of dog, fox and monkey bites to prevent Rabies.

f) Calotropis root together with some pepper is made into a paste and given internally as an antidote for snake and scorpion poison. The above paste is also applied externally.
Dose : 3-5 g internally.

L : ***Capparis zeylanica*** Linn. F : CAPPARACEAE

V : Sabbi (Telugu) S : Vyaghranakhi ?

P : Ladda near Rayagada, Koraput district.

Root is made into a paste mixed in a few drops of sheep milk and applied on the tongue affected with Aphthous ulcer (Visarpi; V : Sabbi).

Note : Vernacular name denotes the disease it cures.

L : ***Careya arborea*** Roxb. F : LECYTHIDACEAE

V : Kumbhi S : Kumbhi

P : Metpad - Dhalpur, Koraput district.

Fruit is believed to be a snake repellent.

L : ***Caryota urens*** Linn. F : ARECACEAE

V : Solopo

P : Phulbani, Phulbani district.

Inner soft stem portion is dried, powdered and used as a substitute for ' Maida' flour.

Note : A country liquor 'Solopo' is tapped from this palm tree.

L : ***Casearia graveolens*** Dalz. F : FLACOURTIACEAE

V : Kirchi (a) ; Kidihi (b) (Jatapu dialect)

P : Old Balimela village, Koraput district (a); Ladda near Rayagada, Koraput district (b)

a) Edible oil is extracted from seed.

b) Fruit is crushed, mixed in drying pools to stupefy fish and catch them with ease.

L : ***Cassia fistula*** Linn. F : CAESALPINIACEAE

V : Sunaari (a-c); Sonaari (d) S : Aragwadha

P : Podia near Kalimela, Koraput district (a); Metpad, Koraput district (b); Phirangia near Phulbani (c); Balliguda, Phulbani district (d)

a) Burning end of a dried fruit is branded on the neck to alleviate mump in cattle.

b) Water extract of stem bark is given internally as laxative.

Dose : 15 ml made of 5 g of bark.

c) Pulp of ripe fruit is applied to boils for cure.

d) Bark-decoction is used for dying the clothes (*Sharma* 2840).

L : ***Cassia hirsuta*** Linn. F : CAESALPINIACEAE

V : Bodo Chakunda

P : Bonda hills near Govindpalli, Koraput district.

Water extract of root is given internally to get rid of intestinal worms.

Dose : 5 ml.

L **Cassia obtusifolia** Linn. F : CAESALPINIACEAE

V : Chakunda S : Prapunnada?

P : Panimunda near Muniguda, Koraput district.

Leaf is eaten as vegetable for its Vermicidal properties (*Sharma*) 2924.

L : **Cassia occidentalis** Linn. F : CAESALPINIACEAE

V : Bada chakunda S : Kasamarda

P : Daringbadi, Phulbani district (a-b)

a) Root, pounded, is given internally in case of abdominal disorders and fever. (*Sharma* 2925)

b) Leaves are eaten as vegetable (*Sharma* 2925)

L : **Cassia tora** Linn. F : CAESALPINIACEAE

V : Chaakunda S : Prapunnada

P : Gumma - Lakshmipur Road near Rayagada, Koraput district: Daringbadi, Phulbani district.

Leaf is eaten as vegetable, for its Vermcidal properties.

L : **Catunaregam spinosa** (Thunb.) Tiruv. F : RUBIACEAE
(*Randia dumetorum* Lamk.) S : Madana

V : Thothala (Jatapu dialect)

P : Ladda near Rayagada, Koraput district.

A mixture of equal quantities of water extract made of stem bark of *Catunaregam spinosa*, *Oroxylum indicum* (V : Pappeni) together with juices of whole plant material of *Andrographis echioides* & *Andrographis paniculata* (V : Bhunimba) is given to children suffering from enlarged spleen. Dose : 10 ml, twice a day.

L : **Catunaregam uliginosa** (Retz.) Sivarajan F : RUBIACEAE
[*Randia uliginosa* (Retz.) DC.]

V : Telko

P : Gurupriyo near Chitrakonda, Koraput district.

Half ripe fruit is eaten as vegetable.

L : **Celastrus paniculatus** Willd. F : CELASTRACEAE

V : Pengumaal, Pengu loto (a & b) S : Joytishmati

P : Bonda hills near Govindpalli, Koraput district (a & b), Ladda near Rayagada, Koraput district (c).

a) Oil extracted from seed is applied externally in itching and eczema (*Hemadri* 3949).

b) Also used as edible oil.

c) A mixture of water extracts of roots of *Celastrus paniculatus*, *Helicteres isora* (V : Kappali) *Imperata cylindrica* (V : Dabba pari) and *Rhynchosia minima* (V : Mraalu vudathpani) is given as an antidote for snake poison.

L : **Celosia argentea** Linn. F : AMARANTHACEAE

V : Kukda pakki (Gondi dialect)

P : Koragaon near Umerkote, Koraput district.

Juice of root is considered to be a cooling agent.

Dose : 5 ml in 20 ml of water, thrice a day.

L : ***Centella asiatica*** (Linn.) Urb. F : APIACEAE

V : Brahmi, Duvaa pothro S : Mandukaparni

P : Bonda hills near Govindpalli; Chitrakonda, Koraput district.

Leaf is eaten as vegetable or roasted in ghee and eaten daily for its tonic properties.

L : ***Chlorophytum arundinaceum*** Baker F : LILIACEAE

V : Phulsaag (Bonda dialect) S : Musali (Sweta)

P : Bonda hills, Koraput district; Kalinga, Phulbani district.

Scape and flowers are eaten as vegetable.

L : ***Christella dentata*** (Forsk.) Holtt. F : THELYPTERIDACEAE

V : Kokodi saag (Bonda dialect)

P : Bonda hills, Koraput district.

Young frond is eaten as vegetable (*Hemadri* 3859).

L : ***Cipadessa baccifera*** (Roth) Miq. F :MELIACEAE

V : Pithomaari (a-c), Pittamari (d)

P : Chitrakonda - Sileru Road, Koraput district (a); Kutragada-Kusumgadi near Muniguda, Koraput district (b-c); Daringbadi, Phulbani district (d).

a) Water extract of stem bark is preserved overnight and given early morning on empty stomach in vitiated bile (Pitha).

Note : The extract, it is said, induces vomiting (emetic)

Dose : 15 ml of extract made of 5 g of stem bark.

b) Castor oil is applied to the leaves and tied over the head to subside heat due to vitiated Pitha.

c) Root extract is given internally in constipation. Dose : 5 ml.

d) Leaves are mixed with Bengal gram flour, fried in form of '*Pakoda*' and eaten (*Sharma* 2906).

L : ***Cissampelos pareira*** Linn. F : MENISPERMACEAE

V : Akanabindu, Ghoda kuri (a & b);Dindanimaada (c) (Jatapu dialect). S : Patha

P : Ramgiri - Gupteswar near Metpad, Koraput district (a & b); Ladda near Rayagada, Koraput district (c).

a) Leaf is tied over the boils for healing.

b) Dried root along with some pepper is made into powder mixed in water and given in dysentery. ('Raktatisara'). Dose : 5g in 15 ml of water.

c) Water extract of root is given in stomach ache. Dose : 2 ml juice in 3 ml of water.

L : ***Cissus quadrangularis*** Linn. F : VITACEAE

V : Horsingaari (a, b & c); Hedasinkuda (d) S : Astisamhari

P : Jhorigaon near Umerkote, Koraput district (a & b);

Panimunda near Muniguda, Koraput district (c & d).

a) Whole plant is made into a paste and applied to the fracture and bandaged with bamboo support.

b) The above paste is warmed and applied externally. Fresh juice of whole plant is also given simultaneously in joint pains. Dose : 10 ml juice thrice a day.

c) Local application of the paste to any part of the body helps in subsiding pains.

d) Whole plant together with black gram is groud well into a paste, applied over the fractured limb and bandaged for bone-setting.

L : ***Cleistanthus collinus*** (Roxb.) Benth. ex Hook. f. F : EUPHORBIACEAE

V : Korodo, Karda (b)

P : Chitrakonda, Koraput district (a); Kurtumgarh near Balliguda, Phulbani district (b).

a) Stem bark is pounded well, mixed in water pools to stupefy and catch fish easily (*Hemadri* 3842).

b) Stem bark, alongwith black catechu is pounded and applied locally on ringworm patches. It is claimed that a single application is sufficient for cure (*Sharma* 2890).

L : ***Cleome viscosa*** Linn. F : CLEOMACEAE

V : Bonjira S : Peeta Suvarchala

P : Gurupriyo near Chitrakonda, Koraput district.

Juice of fresh root is applied to caries teeth to alleviate pain.

L : ***Coldenia procumbens*** Linn. F : BORAGINACEAE

V : Moyini boota (Gondi dialect) S : Tripakshee

P : Karka village near Umerkote, Koraput district.

a) Whole plant is made into a paste and applied in Yoke-sores (*Hemadri* 3897).

b) Leaf juice is used as eye drops to stop reddening of the eyes with burning sensation.

L : ***Coccinia grandis*** (Linn.) Voigt F : CUCURBITACEAE

V : Kunduru S : Bimba

P : Jhorigaon near Umerkote, Koraput district.

Leaf juice is used as ear drops in ear ache.

L : ***Cocculus hirsutus*** (Linn.) Diels F : MENISPERMACEAE

V : Musakani S : Chilahinta

P : Kalimela, Koraput district.

Leaf is eaten as vegetable and its root is made into a paste and given internally in Menorrhagia ('Raktapradara'). Dose : 5 g once a day.

Note : Buttermilk, tamarind, mutton and fish are avoided. Sweets and milk may be taken.

L : ***Cocos nucifera*** Linn. F : ARECACEAE

V : Kobbarichettu (a & b) (Telugu) S : Narikela

P : Manyam konda near Kalimela, Koraput district (a & b)

a) Paste obtained by grinding equal quantities of root of *Cocos nucifera*, *Coccinia grandis* (*V : Tiyya donda. S : Bimba*) and *Momordica charantia* (V : Chedu kaakara; S : Karavellaka) is mixed in some honey and given in palpitation (Hridroga) and difficulty in breathing (Dyspnoea). Dose : 5 g.

b) For children, the above paste is mixed in mother's milk and given in stomach pain due to indigestion.

L : ***Commelina benghalensis*** Linn. F : COMMELINACEAE

V : Kennasuri saag

P : Rayagada, Koraput district.

Leaf is eaten as vegetable.

L : ***Corchorus aestuans*** Linn. F : TILIACEAE

V : Budaa nalita (a) (Koya dialect); Kukurjhuntia (b)

P : Kalimela, Koraput district (a); Kurtumgarh near Balliguda, Phulbani district (b).

a) Seeds are ground well and mixed in warm goat milk or cow milk and made to settle. The supernatent liquid is collected and given internally and the residue is applied externally over the chest to relieve Pneumonia.

Dose : 10ml liquid made of 5g of seed, thrice a day for 1-3 days.

b) Leaves are eaten as vegetable (*Sharma* 3062).

L : ***Costus speciosus*** (Koen. ex Retz.) Sm. F : COSTACEAE

V : Kevukanda, Kevukonda (a) (Bonda dialect), Gaigobra (b) S : Kembuka, Kebuka

P : Bonda hills near Govindpalli & Yekkamba village near Umerkote, Koraput district (a); Balliguda, Phulbani district (b).

a) Rhizome is eaten as vegetable or as condiment for its vermicidal properties.

b) Rhizome alongwith black pepper is pounded and given internally in case of Spermatorrhoea(*Sharma* 3009).

L : ***Crateva roxburghii*** Br. ex Wt. et Arn. F : CAPPARACEAE

V : Baruna S : Varuna?

P : Metpad, Koraput district

Equal quantities of stem bark of 'Baruna', apical bud of *Phoenix acaulis* (V : Bhuyin Kajuri) and seeds of *Dolichos biflorus* (V : Kulatha) are boiled and the decoction thus obtained is given to women on the second day of delivery to overcome Puerperal diseases.

Dose : 100 ml of decoction made of 20g each item, twice a day (only one day).

L : ***Croton bonplandianum*** Baill. F : EUPHORBIACEAE

V : Bonomircho

P : Kutragada - Kusumgudi near Muniguda, Koraput district.

Leaf is chewed to subside Aphthae (Visarpi).

L : ***Cucumis melo*** Linn. var. ***agrestis*** Naud. F : CUCURBITACEAE

V : Budamakaaya (Telugu)

P : Chandrapur near Muniguda, Koraput district.

Root alongwith dried flesh and feathers of a bird locally known as 'Kaamalodi' or 'Kangalodi' is roasted, ground into a paste and given in Jaundice.

Dose : 10 g per day for 7 days.

Note : Preparations of tamarind and other sour articles and fish should be avoided. Limited quantity of salt may be taken. Sweet preparations and ghee are allowed.

L : ***Curculigo orchioides*** Gaertn. F : HYPOXIDACEAE

V : Kutra gulam (a); Kovaa Kaanda (Bonda Dialect) (b); Thalomuli (c). S : Talamuli

P : Chitrakonda - Balimela project Road, Koraput district (a); Bonda hills, Koraput district (b); Kutragada-Kusumgudi near Muniguda, Koraput district (c).

a) Paste of rhizome is applied and bandaged in Whitlow.

b) Paste of rhizome is tied over the wounds and cuts by sharp-edged tools for healing (*Hemadri* 3860).

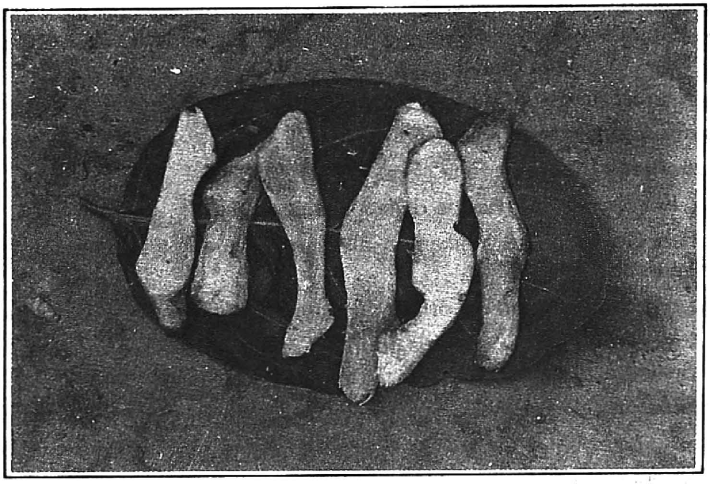

Fig. No. 34

Costus speciosus :

Rhizome is eaten for its Vermicidal properties;
also, a source of Diosgenin useful in Family Planning.

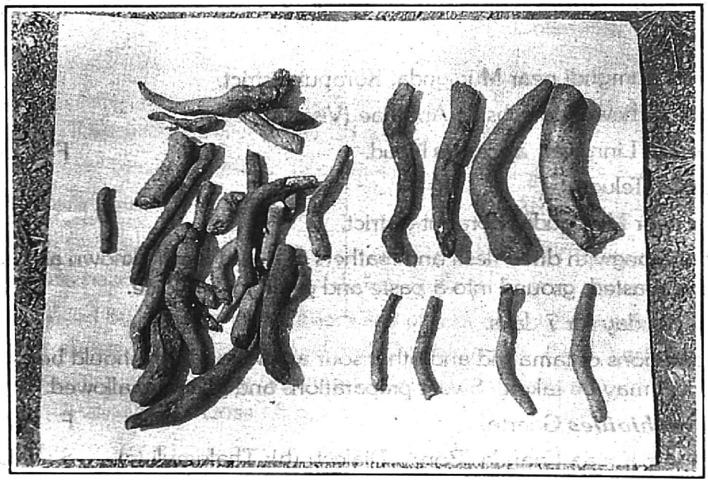

Fig. No. 35

Dioscorea bulbifera :

Boiled tuber is eaten for its Nutritive value

c) A mixture of water extracts of rhizome of *Curculigo orchioides,* root of *Aegle marmelos* (V : Bel) and stem of *Tinospora cordifolia* (V : Guluchi) is given in vitiated 'Pitha' due to heat. Dose : 10 ml.

L : ***Curcuma angustifolia*** Roxb. F : ZINGIBERACEAE

V : Paaluvaa (Gondi dialect), PaalaGundi (a & b) (Telugu). S : Tavakshira?

P : Podia near Kalimela, Koraput district (a); Yekkamba village near Umerkote, Koraput district (b)

a) Powder extracted from the tuber is mixed in warm water and given in Dysentery (blood motions). Dose : 5-10g.

b) The milky powder obtained from the tuberous root is made into 'Kheer' or 'Halva' (sweet preparations) and eaten by local people. (The 'Halva' is sold in the village shandy. 'Kheer' prepared and offered to the Survey team by the Forest Range Officer, Shri Chowdary of Umerkote, was very delicious to taste).

L : ***Curcuma longa*** Linn. F : ZINGIBERACEAE

V : Holdi S : Haridra

P : Gurupoda near Phulbani, Phulbani district.

Charred rhizome is made into powder, mixed in sheep milk and applied to the head affected with boils, in children.This preparation, it is said, has a cooling effect also.

L : ***Cuscuta reflexa*** Roxb. F : CUSCUTACEAE

V : Nirmuli (a & b) S : Amaravalli

P : Kalimela, Koraput district (a); Sundi village near Phulbani, Phulbani district (b).

a) Whole plant is dried, powdered, mixed in water and given internally in itching (Pruritis); also given as blood purifying agent.

b) The plant is pounded, mixed in Til oil and kept exposed in the Sun for 15 days, and also for 15 nights. The medicated oil thus obtained is used as hair tonic to prevent early falling of hair and also to keep it black with lustre.

L : ***Cycas circinalis*** Linn. F : CYCADACEAE

V : Arguna (a-d) S : Vidari?

P : Chandrapur, off Muniguda, Koraput district (a & b); Boudh, Phulbani district (c & d).

a) Young frond (leaf) is eaten as vegetable (*Hemadri* 3933).

b) The cone which is said to emit offensive smell is hung in cattle shed to ward off ticks (a kind of blood sucking insects) infesting the cattle.

c) Fruit is pounded well and mixed in some water. To this, some uncooked rice is added. The whole mixture is transferred into an earthen pot and buried underground for a few days for fermentation so as to obtain a kind of country liquor.

d) Fruit is boiled or roasted and eaten for its nutritional value.

L : ***Cyperus rotundus*** Linn. F : CYPERACEAE

V : Tunga gaddi (a & b) (Telugu); Motha (c) S : Musta

P : Podia near Kalimela, Koraput district (a & b); Gurupoda near Phulbani, Phulbani district (c)

a) Juice of tubers is given in Diarrhoea due to indigestion. Dose : 10 ml.

b) Also given in Diarrhoea due to teeth eruption in children. Dose : 5 ml.

c) Powder or paste of tuberous root is given internally as an appetiser.Dose : 5g once a day.

L : ***Datura innoxia*** Mill. F : SOLANACEAE

V : Duddura, Dutthara (Jatapu dialect)

P : Jaganathpuram near Rayagada, Koraput district.

Fruit is roasted on a gentle fire, its skin is removed and tied over boils for cure.

L : ***Dendrophthoe falcata*** (Linn.f.) Ettingst. F : LORANTHACEAE

V : Madaang (a & b) (Koya dialect) S : Bandaka

P : Old Balimela village, Koraput district (a); Nakadisaroo on way to Gatchapoda, Phulbani district (b).

a) A branch of this stem parasite is placed near the place of thrashing of food grains to ward off evil spirits.

b) Stem of *Dendrophthoe falcata* grown on *Acacia leucophloea* (V : Gondhogoharia) is made into a talisman after offering prayers and tied around upper arm of a woman on the 3rd day of menstruation with a belief that its very presence during intercourse prevents conception.

L : ***Desmodium gangeticum*** (Linn.) DC. F : FABACEAE

V : Chokkosondo (a & b) S : Salaparni

P : Gurupriyo near Chitrakonda, Koraput district (a); Old Balimela village, Koraput district (b)

a) Leaf juice is used as ear drops in `Karnapuya srava' (Otitis). Dose : 2 - 4 drops twice a day.

b) Water extract of root is given in scrotal swelling. Dose : 10g of root twice a day.

L : ***Desmodium triflorum*** (Linn.) DC. F : FABACEAE

V : Kaan sisna (Bonda dialect)

P : Bonda hills, Koraput district

Juice of whole plant is used as ear drops to alleviate ear ache.

L : ***Dichrostachys cinerea*** (Linn.) Wt. et Arn. F : MIMOSACEAE

V : Velturu chettu (Telugu) S : Virataru

P : Manyam Konda near Kalimela, Koraput district.

Leaf is chewed and the juice thus obtained is swallowed in 'Sweta pradara' (Leucorrhoea) and 'Rakta pradara' (Menorrhagia). This is repeated for three days (*Hamadri* 3822).

L : ***Dillenia pentagyna*** Roxb. F : DILLENIACEAE

V : Raayi (Koya dialect)

P : Podia near Kalimela, Koraput district.

Half ripe fruit is eaten as vegetable.

L : ***Dioscorea bulbifera*** Linn. F : DIOSCOREACEAE

V : Pita kanda, Cheranga kandaa (Gondi dialect); Torigya kandaa (Bonda dialect).

P : Bonda hills; Yakkamba village near Umerkote, Koraput district.

Tuber is cut into pieces, boiled and eaten as vegetable or roasted and eaten (Tubers are sold in Yakkamba village shandy).

L : ***Dioscorea pentaphylla*** Linn. F : DIOSCOREACEAE

P : Balliguda, Phulbani district.

Tuber, if eaten, produces sterility in males (*Sharma* 3025).

L : ***Diospyros exsculpta*** Buch.- Ham. F : EBENACEAE

V : Kondu S : Tinduki

P : Daringbadi, Phulbani district.

Unripe fruits are eaten to relieve cough (*Sharma* 2926).

L : ***Diospyros malabarica*** (Desr.) Kostel F : EBENACEAE
(*Diospyros peregrina* Gurke.)

V : Makad kendu, Gaab (Bengali) S : Markata tinduki?

P : Umerkote, Koraput district.

Half ripe fruit is pounded well, mixed in water and kept for two days. A snuff-coloured extract is thus obtained and is used by East Bengali refugees settled along the Dandakaranya Project area to colour their fishing nets.

(Note : Fruit is sold in the shandy at the rate of Rs. 2.00. per hundred)

L : ***Elephantopus scaber*** Linn. F : ASTERACEAE

V : Moyuro chandrika (a); Mayurachula (b)

P : Kutragada - Kusumgudi near Muniguda, Koraput district (a); Daringbadi, Phulbani district (b).

a) Root is dried, burnt, powdered, mixed in gingelly oil and applied externally to burns for healing.

b) Root, powdered alongwith a little table salt, is administered internally to cattle to expel intestinal parasites and to kill insect larvae infesting the long-standing ulcer (*Sharma* 2921)

L : ***Erythrina indica*** Lamk. F : FABACEAE

V : Chavuldwa, Paaladwa S : Paribhadra

P : Ramgiri near Metpad, Koraput district.

a) Stem bark powder is soaked in water for a day and its extract is obtained. Cooked rice is then soaked in it for a day, ground into a paste and given internally in 'Raktapradara' (Menorrhagia).

b) Decoction of stem bark is given internally for its Vermicidal properties. Dose : 10 ml.

L : ***Eucalyptus*** sp F : MYRTACEAE

V : Nilgiri

P : Chitrakonda, Koraput district (a); Kuduk village, near Umerkote, Koraput district (b).

a) Paste of fresh leaf of any species of *Eucalyptus* mixed with some sugar is given in Dysentery. Dose : 5 g.

b) Leaf is made into paste and applied to forehead in head-ache.

L : ***Eupatorium odoratum*** Linn. F : ASTERACEAE

V : Gondri

P : Metpad, Koraput district.

Leaf juice is applied externally in cuts and wounds for healing.

L : ***Euphorbia hirta*** Linn.

F : EUPHORBIACEAE

S : Dugdhika

V : Khiro gatcha (a); Chithaa Kutti, Hari Horika (b-d) (Koya dialect); Rowtho (e); Dudili (f); Dudoli, Horihorika (g & h) (Bonda dialect); Khirogatch (i); Chitaaguti (j); Jutikunta (k); Chittakuta (l)

P : Pottangi, Koraput district (a); Podia, Koraput district (b-d); Chitrakonda, Koraput district (e); Bonda hills, Koraput district (g & h); Rayagada, Koraput district (i); Muniguda, Koraput district (j); Phulbani, Phulbani district (k); Balliguda, Phulbani district (l).

a) Latex is applied to the wounds for healing.

b) Juice of whole plant is mixed in curds and given in Dysentery.

Dose : 2 ml juice in a cup of curd. Sugar is added for taste.

c) Milky latex is used as eye drops in Conjunctivitis.

d) Leaf together with some broken rice is made into a paste and given to mothers in the evening to increase secretion of breast milk. Dose : 3-5 g of leaf for three days.

e) Root is ground into a paste and given internally in Diarrhoea.

Dose : 3 doses of 5 g each, 12-hourly.

f) Juice of whole plant is given in Dysentery in children. Dose : 2 ml.

g) Two grams of whole plant together with 1 or 2 peppers is made into a paste and given in Dysentery (blood or mucus).

h) 2 g of leaf together with fresh water fish and some salt is wrapped in a large leaf, roasted in gentle fire and is given to mothers for secretion of milk.

i) Leaf juice is mixed in curd and given in Diarrhoea. Dose :2 ml of juice.

j) Juice of whole plant together with jaggery is used in the early morning as nasal drops in the left opening (closing the right one while doing so) and laid on the bed for an hour facing down-wards, to improve secretion of mother's milk.

k) Leaves roasted in some oil are tied to the wounds and bandaged to relieve pain and for healing.

l) Leaves, pounded, are given internally to lactating women to increase the secretion of milk (*Sharma* 3031).

L : ***Euphorbia prostrata*** Ait.

F : EUPHORBIACEAE

V : Rongo aalathi

P : Chitrakonda; Koraput district.

Whole plant is dried and made into a powder together with pepper and a small piece of dried peal of lime (*L : Citrus aurantifolia:* S : Swalpa jambira). This powder is mixed in mustard oil and applied externally in Eczema (*Hemadri* 3833).

L : ***Evolvulus alsinoides*** Linn.

F : CONVOLVULACEAE

V : Krishnaankranti

S : Visnukranta

P : Balliguda, Phulbani district.

Plant (5-10g), made into decoction, is given internally alongwith honey or cow's ghee for cough in children (*Sharma* 2995)

L : ***Ficus benghalensis*** Linn.

F : MORACEAE

V : Bot (a & b); Boro (c)

S : Vata

P : Panimunda near Muniguda, Koraput district (a); Phirangia near Phulbani, Phulbani district (b); Baragodha village near Manmunda, Phulbani district (c).

a) Adventitious root is made into a paste, applied over the fractured limb and bandaged for bone setting.

b) External application of milky latax subsides swellings in the groins.

c) Latex is used as eye drops in Conjunctivitis.

L : ***Ficus hispida*** Linn. f. F : MORACEAE

V : Kursah gatcho S : Kakodumbara

P : Chitrakonda, Koraput district.

Dried leaf is roasted, powdered, mixed in castor oil and applied to eye lids in Conjunctivitis for 3 days.

L : ***Ficus religiosa*** Linn. F : MORACEAE

V : Osthu S : Aswatha

P : Kutragada - Kusumgudi near Muniguda, Koraput district.

a) Dried stem bark is powdered and sprayed on the wounds for healing.

b) Stem bark extract together with sugar candy is given internally in Dysentery.

c) The above extract with sugar candy is also given internally as a diuretic agent in case of difficulty in urination due to vitiated 'Pitha'.

L : ***Ficus semicordata*** Buch-Ham. ex Sm. F : MORACEAE

V : Podai (Koya dialect).

P : Chitrakonda - Balimela Project Road, Koraput district.

Ripe fig is eaten raw and half ripe fig is eaten as vegetable.

L : ***Ficus virens*** Ait. F : MORACEAE

(*Ficus lacor Buch.*-Ham.)

V : Jari S : Plaksha

P : Daringbadi, Phulbani district.

Fruits are eaten (*Sharma* 2966)

L : ***Firmiana colorata*** R. Br. F : STERCULIACEAE

V : Sambar Kudal (Bonda dialect)

P : Bonda hills near Govindpalli, Koraput district.

Fiber is extracted from the stem bark (*Hemadri* 3847).

L : ***Flemingia nana*** Roxb. F : FABACEAE

[*Moghania nana* (Roxb.) Mukherjee]

V : Jikidi kanda (Bonda dialect).

P : Bonda hills near Govindapalli, Koraput district.

Pounded root is added in 'Solopo' (Toddy of *Caryota urens*) to enhance its intoxicating properties.

L : ***Gardenia turgida*** Roxb. F : RUBIACEAE

V : Gutu

P : Daringbadi, Phulbani district.

Fruits are pounded and used for washing the clothes (*Sharma* 2933).

L : ***Gnetum ula*** Brogn. F : GNETACEAE

V : Lollorimaal (Bonda dialect)

P : Bonda hills,Koraput district.

Fruit is roasted and eaten (*Hemadri* 3864)

L : ***Grewia tiliifolia*** Vahl F : TILIACEAE

V : Dhaman (a) (Bonda dialect); Ganguti (b) S : Dhanvana

P : Bonda hills, near Govindpalli, Koraput district (a); Daringbadi, Phulbani district (b)

a) Ripe fruit is edible (*Hemadri* 3850)

b) Fibre obtained from twigs and branches is used to prepare ropes (Sharma 2967).

L : ***Helicteres isora*** Linn. F : STERCULIACEAE

V : Vantaidor, Alti (Bonda dialect). S : Avartani

P : Bonda hills, Koraput district.

Fibre is extracted from the stem bark.

L : ***Heliotropium indicum*** Linn. F :BORAGINACEAE

V : Sorugatch

P : Gurupriyo near Chitrakonda, Koraput district.

When children are frightened due to thunder bolt etc., root paste is applied on the head and juice is given internally. Dose : 5 ml juice.

L : ***Hemidesmus indicus*** (Linn.) R.Br. ex Schult. F : PERIPLOCACEAE

V : Sugandhi(a); Ananthamoola (b); Chemidimulo, Sugandhi (c).

P : Podia near Kalimela, Koraput district (a); Ramgiri-Gupteswar near Metpad, Koraput district (b); Kurtumgarh near Balliguda, Phulbani district (c).

a) Root is chewed at bed time to alleviate toothache.

b) Leaf together with some salt is fried in a gentle fire and given internally to act as Galactogogue.

c) i) Root, pounded, is given internally in Diarrhoea.

ii) Root bark, pounded, is administered internally in case of Spermatorrhoea.

iii) Root, pounded, is applied as poultice for inflammation of muscular tissues due to injury (i-iii, *Sharma* 2891).

L : ***Hibiscus rosa-sinensis*** Linn F : MALVACEAE

V : Mandara S : Japakusum

P : Chitrakonda, Koraput district.

Paste made of 3 flowers and some sugar is eaten in Menorrhagia ('Rakta pradara').

L : ***Holarrhena antidysenterica*** Wall. ex DC. F : APOCYNACEAE

V : Kudayi, Karayi (a & b) (Koya dialect); Kure(c), (Gondi dialect); Kurayi(d). S : Kutaja,Indrayava (seed)

P : Podia near Kalimela, Koraput district (a & b); Jhorigaon near Umerkote, Koraput district (c); Balliguda, Phulbani district (d).

a) Seed is ground into a paste, mixed in 'Kanji' and given in Diarrhoea (*Hemadri* 3816). Dose : 2 g of paste in 20 ml of Kanji.

b) The above paste is mixed in milk and given to children in abdominal pain due to dysentery.

c) Root juice is given to children to get rid of intestinal worms. Dose : 5 ml

d) i) One apical leafy bud is kept pressed between the affected teeth to relieve toothache.

ii) Latex is applied locally on wounds to promote healing.

iii) Root is pounded and mixed in liquor to enhance intoxicating properties. (i,iii, *Sharma* 2879).

L : ***Impatiens balsamina*** Linn. F : BALSAMINACEAE
V : Onon
P : Balliguda, Phulbani district.

Leaf paste is applied on heads by women like henna (*Sharma* 3121).

L : ***Imperata cylindrica*** (Linn.) P. Beauv. F : POACEAE
V : Darbha gaddi (Telugu) S : Darbha
P : Podia near Kalimela, Koraput district.

Leaf is used as bandage to avert bleeding from fresh wounds.

L : ***Indigofera cassioides*** Rottl. ex DC. F : FABACEAE
V : Gerli
P : Ramgiri - Gupteswar near Metpad, Koraput district.

Flowers are eaten as vegetable.

L : ***Jatropha curcas*** Linn. F : EUPHORBIACEAE
V : Nepaalamu (a-c) (Telugu); Lonka Kaallo(d), Gabo, Lanka kaalo (e)
P : Podia near Kalimela, Koraput district (a-c); Gurupoda near Phulbani, Phulbani district (d); Nakadisaroo on way to Gatchapoda, Phulbani district(e)

a) Twig is used as tooth brush in tooth ache and

b) aphthous ulcers.

c) Sap is used as nasal drops in Migraine (Arthavabheda Sirassula)

Dose : 2 drops in the opposite nostril.

Note : The latex causes irritation in the mucous membrane.

d) Sticky Sap is applied externally in itch (*Hemadri* 3945).

e) 1-2 ml of sap together with a banana is given to subside Dysentery (both blood and mucus).

L : ***Justicia adhatoda*** Linn. F : ACANTHACEAE
V : Basango S : Vasa
P : Gurupoda near Phulbani, Phulbani district.

Paste of root bark is given together with honey in cough due to 'Pitha' and with Pippali (*L : Piper longum*) and honey if the cough is due to 'Vata'. A bath is also given with water boiled together with leaves of *Justicia adhatoda*, *Vitex negundo* (V : Begunia) and *Azadirachta indica* (V : Limbo) (*Hemadri* 3944).

L : ***Leucas lavandulifolia*** J.E.Sm. F : LAMIACEAE
V : Tumi (a & b) (Bonda dialect);Goyasa(c), Gubi (d & e).
P : Bonda Hills near Govindapalli, Koraput district (a & b), Ramgiri near Metpad (c); Burja village near Umekote, Koraput district (d & e).

a) To get rid of hook worms in infants, the mother is fed with "Roti" (bread) made of flour of wheat or rice together with leaf of "Tumi" (*Hemadri* 3858)

b) In case of eczema, leaf paste mixed in some 'Kusuma' oil (L: *Schleichera oleosa*) is applied externally.

c) Leaf together with some turmeric is ground into a paste and applied to the body in intermittent fever (V: Palijwara).

d) Water extract of root or root and inflorescence is given internally as a remedy for headache. The extract is also used as ear drops and nasal drops for the above purpose.

e) Leaf is eaten as vegetable by nursing mothers to act as a galactogogue.

L : ***Lawsonia inermis*** Linn. F : LYTHRACEAE

V : Momjaathi (a & b) S : Madayantika

P : Phirangia near Phulbani (a); Boudh, Phulbani district (b).

a) Root and pepper are ground well, mixed in 20 ml of rice wash (Tandulodaka) and given in the morning on empty stomach for 2-3 days or upto one week to cure Jaundice.

Dose : Root - 5g & Pepper 3- 4 Nos.

Note : Oil preparations, turmeric, chillies and other spices should be avoided.

b) Paste of root is mixed in rice wash and given internally to terminate pregnency.

L : ***Litsea glutinosa*** (Lour.) C. B. Robinson F : LAURACEAE

V : Gaajaphala mrahanu

P : Nakadisaroo village on way to Gatchapoda, Phulbani district.

Paste of stem bark is applied over the knife injuries and other wounds for healing (*Hemadri* 3952).

L : ***Lygodium flexuosum*** (Linn.) Sw. F : SCHIZAEACEAE

V : Mahajaal

P : Ramgiri-Gupteswar near Metpad, Koraput district.

Rhizome is made into a paste together with turmeric and applied all over the body in convulsions in children (*Hemadri* 3987 x).

L : ***Madhuca longifolia*** (Koen.) Mac Bride var. ***latifolia*** (Roxb.) Chev.

F : SAPOTACEAE

V : Mohul (a) & Mohuli (b) (Koya dialect) S : Madhuka

P : Kalimela, Koraput district (a); Koyametla near Kalimela, Koraput district (b).

a) Oil extracted from seed (Cotyledons, locally known as 'tol') is used as cooking medium. The remaining flour obtained after crushing, is boiled and eaten as food item (*Hemadri* 3820)

b) Decoction of dried stem bark is given in gripping pain in stomach or in headache. Dose : 10 ml decoction made of 10 g of bark.

L : ***Mallotus philippensis*** (Lamk.) Muell.- Arg. F : EUPHORBIACEAE

V : Sinduro gatcho S : Kampilla

P : Dudhbeda near Metpad, Koraput district.

Juice of fresh root is used as ear drops in ear ache. Dose : 3 drops.

L : ***Mangifera indica*** Linn. F : ANACARDIACEAE

V : Ambo (a); Aam (b) S : Amra

P : Chitrakonda, Koraput district (a); Kutragada near Metpad, Koraput district (b).

Water extract of stem bark mixed in Kanji (rice gruel) is given in Dysentery and Diarrhoea. Dose : 10 ml extract.

L : ***Martynia annua*** Linn. F : MARTYNIACEAE

V : Bhaagonakho

P : Gurupoda near Phulbani, Phulbani district

a) Charred fruit is made into a powder, mixed in 'Sisso oil' (Oil extracted from heart wood of *Dalbergia latifolia*) and is applied externally in Eczema.

b) Alternately, resin of nut of *Semicarpus anacardium* (V : Bhalya) and root paste of *Plumbago zeylanica* (V : Chintaa mulo) are also added to the above preparation, boiled for a while and applied externally in Eczema and such other skin diseases.

L : ***Meyna pubescens*** (Kurz) Robyns — F : RUBIACEAE

(*Vangueria pubescens* Kurz)

V : Karadiyakoli

P : Balliguda, Phulbani district.

Fruits, pounded, are used as fish poison (*Sharma* 3021).

L : ***Milletia extensa*** Baker

(*Milletia auriculata* Baker ex Brand). — F : FABACEAE

V : Majja (a); Katerumaalo (c)

P : Chitrakonda - Sileru Road, Koraput district (a); Bonda hills, Koraput district (b); Gumma-Lakshmipur road near Rayagada, Koraput district (c).

a) Stem bark is used as stupefying agent for catching fish.

b) Root juice is applied externally to ward off ticks and flies infecting the cattle (*Hemadri* 3857).

c) Root is said to be a fish poison.

L : ***Mimosa pudica*** Linn. — F : MIMOSACEAE

V : Laaj kudi (a-c) — S : Lajjalu

P : Chitrakonda - Sileru Road, Koraput district (a); Karagaon near Umerkote, Koraput district (b) ; Balliguda, Phulbani district (c).

a) Root is chewed and the juice thus obtained is swallowed or root juice is given with hot water in Malarial fevers to alleviate rigors. Dose : 5 g of root, twice for one day.

b) Juice of whole plant is given in Leucorrhoea. Dose : 4 ml twice a day for 5-7 days.

c) Leaf, made into fine paste, is applied on forehead in case of head-ache (*Sharma* 2999).

L : ***Momordica charantia*** Linn. — F : CUCURBITACEAE

V : Coloro — S : Karavellaka

P : Phulbani, Phulbani district.

Juice of seven leaves is given daily in Diabetes mellitus. Also half ripe fruit is rubbed on a stone and the soft foam thus obtained is given thrice a day.

Note : Tea, Coffee and other intoxicants should be avoided.

L : ***Moringa oleifera*** Lamk. — F : MORINGACEAE

V : Munaga gatch (a); Muninga (b & c); Muniya gatch (d). — S : Shigru

P : Karagaon near Umerkote, Koraput district (a); Gurupoda, Phulbani district (b & c); Nakadisaroo on way to Gatchapoda, Phulbani district (d).

a) Dried stem bark is rubbed on a stone with a few drops of water and the paste thus obtained is mixed in coconut oil and applied over the body in Eczema.

b) Seed coat is made into a powder, mixed in honey and given internally as an anti emetic. (Vamanahara).

c) Leaf together with green gram (V : Moong) is boiled in water and filtered. The decoction thus obtained is given in fevers due to vitiated 'Pitha'. Dose : 20 ml twice a day.

d) Juice of stem bark is warmed and used as eye drops in Conjunctivitis.

L : ***Mucuna pruriens*** (Linn.) DC. — F : FABACEAE

(*Mucuna prurita* Hook.)

V : Duladaama teega (Telugu) — S : Atmagupta, Kapikatchu

P : Podia near Kalimela, Koraput district.

A paste made of roots of *Mucuna pruriens*. *Pygmaeopremna herbacea* (V : Gantu bharangi; S : Bharangi). *Tephrosia purpurea* (V : Yelukari chettu) together with a few cloves of *Allium sativum* Linn. (V : Vellulli, S : Lasuna) is given internally on the third day of menstruation to relieve dysmenorrhic pain thereby helping in conception. Dose : 10 g.

Note : The women should have intercourse on the same night of drug administration and should take only water.

L : ***Murraya koenigii*** (Linn.) Spreng. F : RUTACEAE

V : Lesundodando S : Surabhi nimba

P : Daringbadi, Phulbani district.

i) Twigs are used to brush teeth.

ii) Leaves are eaten in form of 'Pakoda' (i & ii, *Sharma* 2969).

L : ***Musa paradisiaca*** Linn. F : MUSACEAE

V : Kodali S : Kadali

P : Dudhbeda near Metpad, Koraput district.

Tuber is made into a paste and applied to the head in head-ache.

L : ***Nyctanthes arbortristis*** Linn. F : NYCTANTHACEAE

V : Gangashivli S : Parijata

P : Phulbani, Phulbani district; Metpad, Koraput district.

Leaf juice together with black pepper is given internally in Malarial fever.

(Note : Tried successfully by Shri Patro, Assistant Conservator of Forests, Phulbani).

L : ***Nymphaea nouchali*** Burm. f. F : NYMPHAEACEAE

V : Koyiphulo (Gondi Dialect) S : Kumuda

P : Timanpur near Umarkote, Koraput district.

Fresh tuber along with two egg-shells of hen (V : Kukuda andaa) and one year old charred jaggery (V : Poolagudo) is ground well and made into pills. These pills are given from 4th day of menstruation as a permanent antifertility drug.

Dose : 10 gm twice a day for 7 days.

L : ***Ocimum americanum*** Linn. F : LAMIACEAE

(*Ocimum canum* Sims)

V : Bhutulasi (Telugu)

P : Manyam konda near Kalimela, Koraput district.

Leaf together with some pepper is made into a paste and applied externally in Herpes zoster (Visarpa).

Note : The patient should avoid chicken and fish (*Hemadri* 3821)

L : ***Ocimum basilicum*** Linn. F : LAMIACEAE

V : Dulva, Kappar Kaanti

P : Ramgiri near Metpad, Koraput district.

Seeds are soaked in water, made into a drink with sugar and taken for its cooling effect.

L : ***Olax scandens*** Roxb. F : OLACACEAE

V : Hittimaada (Jatapu dialect)

P : Ladda near R yagada, Koraput district.

Leaf is eaten as vegetable (*Hemadri* 3911).

L : ***Oroxylum indicum*** (Linn.) Vent. F : BIGNONIACEAE

V : Ponponia (a); Kotadi chettu (b) (Telugu) S : Syonaka

P : Chandrapur, off Muniguda, Koraput district (a); Manyamkonda near Kalimela, Koraput district (b).

a) Stem bark of *Oroxylum* together with roots of *Holarrhena antidysenterica* (V: Kudayi), *Cocos nucifera* (V : Nodia), *Jasminum sambac.* (V : Malli) and *Crossandra undulaefolia* (V : Itla) are ground well into a paste, mixed in mother's milk and given to children suffering from liver complaint. Dose : 2-4 g of paste.

b) Juice extracted from stem bark is given in back ache. Dose : 10 ml.

L : ***Oryza sativa*** Linn. F : POACEAE

V : Bhato (Cooked rice) S : Shali

P : Nakadisaroo village on way to Gatchapoda, Phulbani district.

a) One day old cooked rice in 'Kanji' together with old Ragi grains (Mandia), human hair and the clay soil obtained from an ant's hill is burnt and the powder thus obtained is applied to severe burns for healing.

b) Kanji (V : Torani) is mixed in some honey and given in Jaundice.

Dose : 50 ml, only two doses.

Note : Massage to the soles of the patient is done with the help of a bell-metalled vessel by applying some oil to its bottom.

L : ***Ougeinia oojeinensis*** (Roxb.) Hochr. F : FABACEAE

V : Bandano (Gondi dialect) S : Tinisa

P : Timanpur near Umerkote, Koraput district.

Powdered stem bark is added to milk and given in both Dysentery and Diarrhoea.

Dose : 5 g in 100 ml milk for three days.

L : ***Oxalis corniculata*** Linn. F : OXALIDACEAE

V : Ambhit (a & b) S : Changeri

P : Daringbadi (a), Balliguda (b), Phulbani district.

a) Leaves are eaten as vegetable (*Sharma* 2950)

b) Leaf, pounded, is applied on tongue in case of stomatitis (*Sharma* 3027)

L : ***Paederia foetida*** Linn. F : RUBIACEAE

V : Prasarani S : Prasarani

P : Kurtumgarh near Balliguda, Phulbani district.

Leaves are eaten as vegetable by women after childbirth to avoid Puerperal disorders (*Sharma* 2892).

L : ***Pedilanthus tithymaloides*** (Linn.) Poit. F : EUPHORBIACEAE

V : Basam pothro

P : Bonda Hills near Govindpalli, Koraput district.

Leaf is warmed and tied over an abscess for cure.

L : ***Pergularia daemia*** (Forst.) Chiov. F : ASCLEPIADACEAE

V : Uthuraali (a), Uthurulla (b); Uthurli (c) S : Uthamarani

P : Muniguda & Panimunda, Koraput district (a & b); Chandrapur near Muniguda, Koraput district (c).

a) Leaf juice mixed in curd is given in Malarial fevers.

Dose : 5 ml, only one dose; if needed a second dose on the second day.

b) Milky latex is applied to wounds for healing.

c) Paste of root is mixed in 'Rai gruel' and given internally to increase secretion of mother's milk. Dose : Root 5 g.

L : ***Phoenix acaulis*** Buch.-Ham. *ex* Roxb. F : ARECACEAE

V : Khojori konda

P : Podia near Kalimela, Koraput district.

Soft, apical bud is eaten for its curative action on Puerperal diseases; also nutritional.

L : ***Phoenix sylvestris*** (Linn.) Roxb. F : ARECACEAE

V : Yeeta (Telugu)

P : Chitrakonda, Koraput district.

a) Water extract made of roots of *Phoenix sylvestris, Hemidesmus indicus* (V : Sugandhi paala) together with juice of *Citrus aurantifolia* (Christm.) Swingle (V : Nimma) is given in Menorrhagia ('Rakta pradara').

Dose : 10 g of each root with 5 ml of lime juice once a day for 7 days.

b) Water extract of root together with some 'Jiraka' and sugar is given in Haematuria ('Rakta mootra'). Dose : 50 ml made of 5 g of each item.

L : ***Phyllanthus emblica*** Linn. F : EUPHORBIACEAE

V : Onla S : Amalaki

P : Balliguda, Phulbani district.

Leaf-juice is given internally in Diarrhoea (*Sharma* 2862)

L : ***Phyllanthus reticulatus*** Poir. F : EUPHORBIACEAE

V : Jojangi S : Krishna Kambhoji

P : Gupteswar near Metpad, Koraput district.

Leaf is pounded together with some sugar and given in Dysentery (blood or mucus). Dose : 5 g each.

L : ***Plumbago rosea*** Linn. F : PLUMBAGINACERE

V : Rakto chitaaparu (a, b & g), Raktachita (c-f). S : Chitraka (Rakta)

P : Jhorigaon near Umerkote, Koraput district (a&b); Kutragada near Muniguda, Koraput district (c-f); Nakadisaroo village on way to Gatchapoda, Phulbani disatrict (g).

a) The woody portion of the root after removing its bark is tied around upper arm of a hydrocele patient and kept for 3 or 4 days. On removing the root, a ring-like brun mark is seen around the upper arm. By treating thus, it is claimed, that the patient will be cured of hydrocele in due course.

Note : If the swelling is in the left testis, the root is tied to the right upper arm and vice-versa.

b) A cup of cow milk (preferably of black cow) is stirrred well with a piece of the root and given to terminate pregnency. The abortion, it is claimed takes place within 2-3 days.

c) For alleviating all types of head-ache, some oil is applied on the forehead or temple and over it, paste made of "Rakta Chita" root in small lumps is applied and removed as soon as burning sensation is strarted.

d) Root paste is applied and bandaged for healing knife cuts.

e) Decoction of horse grsm (L : *Dolichos biflorus*) and root juice of " Rakta Chita" is given early in the morning on empty stomach to terminate pregnecy.

Dose : 100 ml decoction of horse gram and 5 ml juice of Rakta chita, 1-3 times.

f) To avoid pregnancy, the above prepatation is given on the 4th day of menstruation and continued till 7th day.

g) Root juices of *Plumbago rosea* & *Hibiscus rosasinensis* (V : Mandaar) are mixed in 10-15 ml of "Mahuli" liquor (V : *Madhuca longifolia* var. *latifolia* and given in the morning along with "Magur-mutch-phulo", the red coloured brain portion of a small species of fresh water fish, locally known as " Magur" to terminate pregnancy.

L : ***Plumbago zeylanica*** Linn. F : PLUMBAGINACEAE

V : Chitramulam (a) (Telugu); Chitramulu (b) S : Chitraka (Sweta)

P : Manymkonda near Kalimela, Koraput district (a); Bonda hills, Koraput district. (b).

a) A paste made of 10 g each of root of *Plumbago zeylanica. Calotropis gigantea* (V: Jilledu), *Pavetta tomentosa* (V : Papidi), *Crotalaria pallida* (V: Adavi janumu, Gulagitcha) and leaf & stem bark of *Vitex negundo* (V : Vavili, S : Nirgundi) togethar with 10 g of "Raskarpur" is mixed in some water and given internally in Paralysis.

Dose : 5 ml thrica a day .

b) Root is pounded and mixed in "Pendam" (a local beverage) to enhance its digestive properties.

L : ***Plumeria acuminata*** Ait. F : APOCYNACEAE

V : Hozaar phul, Kaat champa.

P : Gupteswar near Metpad, Koraput district.

Fresh peduncle is roasted on gentle fire and the paste obtained from it is applied externally to affected part due to Paralysis. The treatment is continued for about 6 months.

L : ***Pogostemon myosuroides*** (Roth) El Gazzar et L . Watson

[*Dysophylla myosuroides* (Roth) Benth.] F : LAMIACEAE

V : Iswara daal.

P : Chitra konda, Koraput discrict.

Patients of Chicken pox are treated with the fumes obtained by burning dried leaf and inflorescence (*Hemadri* 3829)

L : ***Portulaca oleracea*** Linn. F : PORTULACACEAE

V : Lunia S : Brihallonika

P : Gurupriyo near Chitrakonda, Koraput district.

Juice of whole plant with some salt is given to children to get rid of hook worms.

L : ***Premna latifolia*** Roxb. F : VERBENACEAE

V : Aggibatthu S : Agnimantha?

P : Ramgiri near Metpad, Koraput discrict.

Leaf is eaten as vegetable (*Hemadri* 3873).

L : ***Pterocarpus marsupium*** Roxb. F : FABACEAE

V : Bij S : Bijasara

P : Ramgiri - Gupteswar near Metpad, Koraput district

Stem bark of *Pterocarpus*, *Bridelia retusa* (V : Kassi), *Buchanania lanzan* (V: Carkoli), *Syzygium cumini* (V: Jamun) are made into a decoction. 5 litres of the above decoction is further boiled to from vapours. A patient with "Sotha" (Oedema) is exposed to the above vapours for cure.

Note : The patient is made to lie down in a cot, covered with cloth and the vapours are allowed to pass through underneath the cot.

L : ***Pueraria tuberosa*** (Roxb. ex Willd.) DC. F : FABACEAE

V : Paataal Kumda (a); Bhooyi Kopaal, Bhooyi Kokar (b) (Gondi dialect); Kakarmala (c). S : Vidari

P : Rayagada - Laxmipur forests, Koraput district (a); Jhorigaon near Umerkote, Koraput district (b); Daringbadi, Phulbani district (c).

a) Paste of tuber is warmed and applied to head to relieve head-ache (*Hemadri* 3918)

b) Tuberous root is made into a paste, mixed in some mustard oil and applied to the body to relieve body pain.

c) Tuber, pounded into fine paste is applied locally in case of Mastitis (*Sharma* 2928).

L : ***Rauvolfia serpentina*** (Linn.) Benth. ex Kurz F : APOCYNACEAE

V : Paathal garda (a-c);Paatal garudi (d-e); Paataal garuda (f). S : Sarpagandha

P : Gurupriyo near Chitrakonda, Koraput district (a & b) ; Dudhbeda near Metpad, Koraput district (c): Katragada near Metpad, Koraput district (d); Phulbani, Phulbani district (a); Kurtumgarh (Balliguda), Phulbani district (f).

a) Root is rubbed on a stone and the paste thus obtained is applied externally as an antidote for snake poison (*Hemadri* 3834).

b) Root is said to be snake repellant.

c) Root is rubbed on a stone and the paste thus obtained is mixed in water, filtered and given in stomach ache. Dose : 2 g paste in 10 ml water thrice a day for 3 days.

d) Root is rubbed on a stone and the paste thus obtained is applied externally on the bitten part as an antidote for snake and scorpion poison. Some paste is also mixed in water and given internally. Dose : 5g.

e) Root is pounded and mixed in "Solopo" (a toddy tapped from *Caryota urens* Linn.) to enhance its digestive qualities.

f) Root & leaves, pounded are applied locally and bandaged in case of bone fracture (*Sharma* 2893).

L : ***Ricinus communis*** Linn. F :EUPHORBIACEAE

V : Joda S : Eranda

P : Balliguda, Phulbani district .

Leaf made into fine paste is applied locally in case of piles (*Sharma* 3132)

L : ***Rubia cordifolia*** Linn. F : RUBIACEAE

V : Rango chero S : Manjista

P : Ramgiri near Metpad, Koraput district.

Equal quantities of roots of *Rubia cordifolia, Jasminum sambac* (V : Malli chero), *Cocos nucifera* (V : Nodiya chero), flowers of *Crossandra infundibuliformis*, stem bark of *Phyllanthus distichus* (V : Rajaaonla) together with an insect locally known as "Patta puko" (Arudra: a small velvety, orange-red insect) and " Rasindo" (S : Ras sindhoor) are ground well and made into pills. These pills of 1g each are given to children suffering from fever. Dose : Two pills a day.

Note : Ras sindhoor half the quantity of one item.

L : ***Samania saman*** (Jacq.) Merr. F : MIMOSACEAE

V : Nidravati

P : Gupteswar near Metpad, Koraput district.

Leaf juice is used as bed bug repellent.

L : ***Sansevieria roxburghiana*** Schult.f. F :AGAVACEAE.

V : Murga S : Murva ?

P : Muniguda, Koraput district.

Juice of rhizome mixed in waterr is given on empty stomach to terminate pregnancy. Dose : 1 - 2 ml of juice mixed in 4 ml of water.

L : ***Schefflera venulosa*** (Wt.et Arn.) Harms F : ARALIACEAE

V : Nondal gatcho

P : Chitrakonda, Koraput district.

Fruit is ground into a paste mixed in water and given internally to cattle suffering from Diarrhoea. Dose : Paste of 100 g once a day for 7 days in 200 ml water.

L : ***Schleichera oleosa*** (Lour.) Oken F : SAPINDACEAE

V : Kosum (a & b); Kusum (c & d) S : Kosamra

P : Koyametla near Koraput, Koraput district (a & b);

Nakadisaroo, on way to Gatchapoda, Phulbani district (c);

Manmunda near Boudh, Phulbani district (d).

a) Stem bark is ground into a paste, applied over the affected part and bandaged to relieve pain in contusion injuries and fractures. This is repeated for 2 or 3 days.

b) Water extract of fresh stem bark is given internally to relieve pain in bone fractures.

c) Stem bark is made into a paste, warmed and applied at bed time to subside sprains.

d) Stem bark is used as tanning material.

L : ***Scoparia dulcis*** Linn. F : SCROPHULARIACEAE

V : Bonogajari

P : Kurtumgarh (Balliguda), Phulbani district.

Leaves, pounded, are administered internally in case of Spermatorrhoea (*Sharma* 3058).

L : ***Semecarpus anacardium*** Linn. f. F : ANACARDIACEAE

V : Bhaalya (a & b) S : Bhallataka

P : Timanpur near Umerkote, Koraput district (a); Balliguda, Phulbani district (b).

a) Resin of the nut is applied to a thread and tied around upper arm of a hydrocele patient for cure.

Note : The thread is tied to the left upper arm to cure right side hydrocele and vice versa. Ghee is applied to soothe the permanent burnt mark caused by the vesicant juice.

b) Ripe cupular hypanthium on which the fruit is seated, is given to cattle alongwith fodder to increase appetite (*Sharma* 3004).

L : ***Shorea robusta*** Gaertn. f. F : DIPTEROCARPACEAE

V : Sal S : Sal

P : Balliguda, Phulbani district.

Bark-powder is sprinkled on ulcers for healing (*Sharma* 2848).

L : ***Sida cordata*** (Burm.f.) Borss. F : MALVACEAE

V : Undra badni (a), Biskapori (b); Bisakhapari (c).

P : Chitrakonda, Koraput district (a); Phulbani, Phulbani district (b); Daringbadi, Phulbani district(c).

a) Leaf is made into paste and used as external application in Scabies and Eczema.

b) Leaf is made into a paste and applied to putrid wounds for healing.

c) Leaves pounded, warmed and applied as poultice locally to relieve pain due to injury by blunt articles (*Sharma* 2919).

L : ***Sida rhombifolia*** Linn. F : MALVACEAE

V : Kutragada near Muniguda, Koraput district.

a) Root extract is given in fevers. Dose : 10 ml,twice a day.

b) In the evening of Saturday or Sunday, root is dug out after offering prayers and tied in the night around the upper arm of the patient to subside fever due to evil spirits.

L : ***Smilax zeylanica*** Linn. F : SMILACACEAE

V : Mootri, Mootrilaha (Bonda & Gondi dialect).

P : Bonda hills, Koraput district (a & b); Jhorigaon near Umerkote, Koraput district (c).

a) Juice of root is given internally in Dysentery ('Raktatisar'). Dose : 10 ml, 3 doses.

b) The stem is used as tooth brush to strengthen gums.

c) Powder made of equal quantities of roasted root of 'Mootrilaha' and pepper is given for 40 days in cases of infertility.

L : ***Solanum incanum*** Linn. F : SOLANACEAE

V : Pitha baingan choto (a); Parsaapa; Adavivankaya (Telugu) (b & c)

P : Pottangi near Koraput, Koraput district (a); Kalimela, Koraput district (b & c).

a) Fruit is roasted on gentle fire and its pulp is applied to the caries tooth to relieve pain.

b) 2-6 drops of root juice is given internally in Chicken pox (*Hemadri* 3827).

c) Fruit is fried in ghee and eaten in Asthma. ('Swasaroga').

Dose : 3 fruits once a day for 3 days.

Note : Limited quantities of salt and chillies are added for taste (*Hemadri* 3827).

L : ***Solanum myriacanthum*** Dunal F : SOLANACEAE

(*Solanum khasianum* Clarke)

V : Bejibaigan

P : Daringbadi, Phulbani district.

Fruit powder is smoaked to relieve toothache (*Sharma* 2972).

L : ***Solanum surattense*** Burm. f.

F : SOLANACEAE

V : Revatimunaga (Telugu) (a);

S : Kantakari

Chokkada bheji (b & c): Renginibhejri (d) (Gondi).

P : Podia near Balimela, Koraput district (a); Kutragada-Kusumgudi near Muniguda Koraput district (b & c); Karka village near Umerkote, Koraput district (d).

a) Fruit is dried, powdered and placed in a plate. Boiling water is poured in it and covered with an earthen pot so that the medicated vapours gush out of a hole at its top. Caries teeth are exposed to these vapours to relieve tooth ache. Thereafter, twig of *Ficus religiosa* is used as tooth brush for three days to prevent relapse.

b) Paste of whole plant is mixed with some honey and given in Asthma and Woophing cough. Decoction is also used for the above purpose.

c) Fruit is dried, powdered and smoked in a pipe to get rid of worms (Krimi) in the caries teeth.

d) Half ripe fruit is made into curry and eaten as a remedy for cough. A necklace made of these fruits is also tied around the neck for the above purpose.

L : ***Soymida febrifuga*** A. Juss.

F : MELIACEAE

V : Rohini (a,b & g), Somi (c-f) (Telugu)

S : Mamsarohini

P : Khamarguda on the bank of Sabari river near Podia, off Kalimela, Koraput district (a & b); Manyamkonda near Kalimela, Koraput district (c); Chitrakonda, Koraput district (d-f): Metpad-Dhalpur, Koraput district (g).

a) Water extract of stem bark is given internally in scrotal swelling (*Hemadri* 3818).

b) Water extract of stem bark is given as an antidote for snake bite (*Hemadri* 3818).

Dose: 30ml of extract.

c) 10g of stem bark is ground well together with 30g of common salt, mixed in 100 ml of water and given in snake bite as an antidote. The patient, it is said, gets relieved of the poison within half an hour.

Note : The patient should not drink water immediately after relief. He may take rice gruel. Narcotics are not allowed.

d) Stem bark of *Soymida febrifuga* together with root of *Phoenix sylvestris* (V :Yeeta); a few black peppers and some: "Jiraka" (L: *Cuminum cyminum* Linn.) is pounded well, its juice extracted and given on empty stomach in Dysmenorrhoea and also to assure effective fertilization. Dose : 100 ml once a day for 3 days.

e) Water extract of stem bark together with some salt is given as an antidote for snake poison.

Dose : 15ml.

f) Paste of stem bark is applied externally or the above extract is given internally as an anti dote for scorpion poison.

g) Extract of stem bark is given in Malarial fevers. Dose : 15ml,made of 15g of bark.

L : ***Sterulia urens*** Roxb.

F : STERCULIACEAE

V : Gonduli (a); Gendli (b & c)

S : Kateera

P : Kalimela, Koraput district (a); Chitrakonda, Koraput district (b & c).

a) One teaspoon full of *Sterculia* gum is given internally to act as anti-dysenteric agent.

b) "Gendli" gum is soaked in water over night and filtered. The solution thus obtained is mixed in fresh milk and given internally to act an aphrodisiac.

c) White flakes obtained by keeping the above solution in the sun are fried in ghee made into

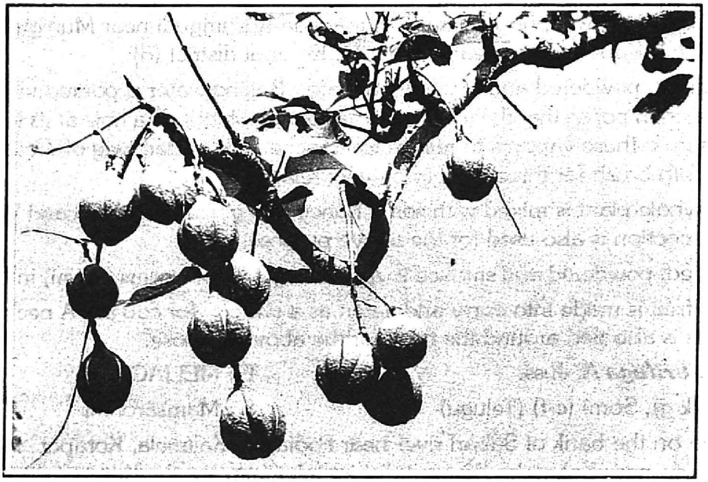

Fig. No. 36

Soymida febrifuga :
Stem bark is used in Dysmenorrhoea, Malarial fever ;
antidote for snake & scorpion poisons

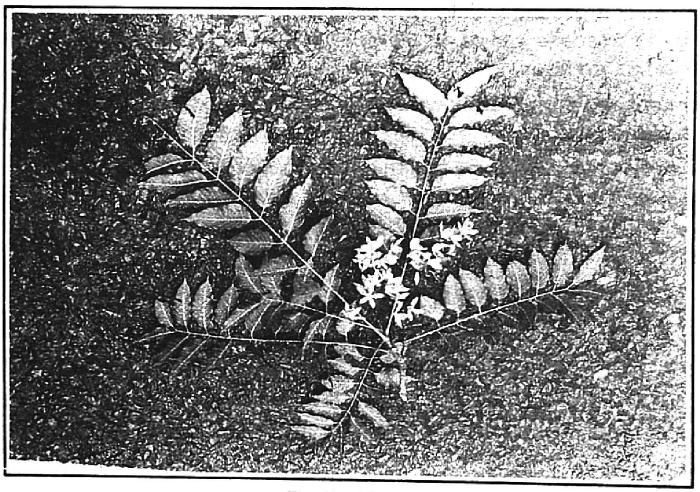

Fig. No. 37

Toona ciliata :
Stem bark is used in fevers,
particularly of female patients!

a powder together with some sugar and given internally to act as an Aphrodisiac agent.

L : *Stereospermum suaveolens* (Roxb.) DC.
[*S. chelonoides* (Linn.f.) DC.] F : BIGNONIACEAE

V :Kalugudu (a) (Telugu); Paardi (b) S : Patala

P : Podia near Kalimela, Koraput district (a); Ramgiri-Gupteswar near Metpad, Koraput district (b).

a) The broken bits of the dessipiment from the fruit resembling some sort of disc like beads, are made into a necklace to wear around the neck to prevent or cure Malarial fevers and Conjunctivitis (*Hemadri* 3815).

b) Decoction of 100 g each of stem barks of *Stereospermum*. *Oroxylum indicum* (V : Pampuni), *Aegle marmelos* (V : Bilvo), *Gmelina arborea* (V : Gambhari) & *Premna latifolia* (V : Aggibatthu) is made. To this decoction, powder made of 21 numbers of `Pippali' (*Piper longum*) is added and given to patients suffering from fever and Haematurea ("Raktamutra").
Dose : 3 doses of 25 ml each.

L : ***Strychnos nuxvomica*** Linn. F : STRYCHNACEAE

V : Kuchala S : Vishamushti

P : Kalinga - G. Udayagiri, Phulbani district.

Seed is rubbed on a stone and the paste thus obtained is given internally alongwith "Mohul Liquor" or with one day old "Kanjee" to act as a temporaaary contraceptive.

Dose : 1 g paste in 10 ml of mohul or 2 g paste in 40 ml of Kanjee.

L : ***Syzygium cumini*** (Linn.) Skeels F : MYRTACEAE

V : Jaambugatch S : Jambu

P : Nakadisaroo village on way to Gatchapoda near Phulbani, Phulbani district.

A mixture of stem bark extracts of *Syzygium cumini*. *Mangifera indica* (V :Ambo gatco, Pidia mrahanu) and *Madhuca longifolia* var. *latifolia* (V : Irpi mrahanu, Mahula) is given in Diarrhoea. Dose : 15 ml.

L : ***Syzygium operculatum*** (Roxb.) Gamble F : MYRTACEAE
var. ***obovata*** (Duthie) Gamble

V : Kutni jumbu

P : Balliguda, Phulbani district.

Ripe fruits are eaten (*Sharma* 2878).

L : ***Tamarindus indica*** Linn. F : CAESALPINIACEAE

V : Thenthuli S : Amlika, Cincha

P : Baragocha near Manmunda, Phulbani district.

Leaf is made into paste, boiled and applied externally to subside swellings.

L : ***Tephrosia candida*** (Roxb.) DC. F : FABACEAE

V : Ghirdi

P : Daringbadi, Phulbani district.

Flowers are eaten as vegetable (*Sharma* 2910).

L : ***Tephrosia purpurea*** (Linn.) Pers. F : FABACEAE

V : Vempali (a); Kolthia (b); Kulthia onhra (c). S : Sarapunkha

P : Chandrapur near Muniguda, Koraput district (a); Phulbani, Phulbani district (b); Balliguda, Phulbani district (c).

a) Water extract of root is given in abdominal pain. Dose : 10 g of root.

Note : For quick relief, a wet cloth is spread on the abdomen and gently pressed with a hot sickle (a kind of heat treatment).

b) Root is chewed and the juice thus obtained is swallowed to subside stomach ache.

c) Root, pounded, is administered internally in abdominal pain (*Sharma* 3033).

L : ***Teramnus labialis*** (Linn. f.) Spreng. F : FABACEAE

V : Aakkimonje S : Mashaparni

P : Panimunda near Muniguda, Koraput district.

Seed is roasted, powdered and put in the eyes affected with Conjunctivitis.

L : ***Terminalia alata*** Heyne ex Roth F : COMBRETACEAE

V: Sahaja (a); Kola sahaja (b); Panda sajo (c)

P : Jhorigaon near Umerkote, Koraput district (a); Chandrapur near Muniguda, Koraput district (b) Balliguda, Phulbani district (c)

a) Tender leaf is chewed and applied along with saliva to bleeding wounds and bandaged for healing.

b) Stem bark and leaf are used in the preparation of "Mohul" liquor made of *Madhuca* flowers (corollas) to increase the yield.

c) Vapours of boiling leaves are inhaled to relieve head-ache. (*Sharma* 3020).

L : ***Terminalia arjuna*** (Roxb.ex DC.) Wt.et Arn. F : COMBRETACEAE

V : Arjuna S : Arjuna

P : Kalimela, Koraput district (a); Kutragada - Kusumgadi near Muniguda, Koraput district (b & c).

a) Powder of stem bark is mixed in oil and applied to wounds for healing.

b) Powder of stem bark with honey is given in cough and Asthma. (*Hemadri* 3930).

c) The above preparation is also given internally to hasten the setting up of fractured limbs (*Hemadri* 3930).

L : ***Terminalia bellirica*** (Breyn ex Gaertn.) Roxb. F : COMBRETACEAE

V : Behada (a-d); Billa (b); S : Vibhitaka

P : Kalimela, Koraput district (a); Balimela village, Koraput district (b & c), Gumma - Lakshmipur near Rayagada, Korput district (d).

a) Oil extracted from seed reduces constipation if used as cooking medium.

b) Dried fruit powder is kept over night in cold water and the infusion thus obtained is given in coughs.

c) \`Triphala' powder is kept over night in cold water and the infusion thus obtained is given in Diarrhoea. Dose : 1 fruit each two doses in 50 ml water.

d) A mixture of paste made of stem barks of *Terminalia bellirica*. *Soymida febrifuga* (V : Ruppuni), *Schleichera oleosa* (V : Kusum) and *Madhuca longifolia* var. *latifolia* (V : Mohulo) is warmed and used as poultice in sprains and body pains.

L : ***Terminalia chebula*** Retz. F : COMBRETACEAE

V : Horida S : Haritaki

P : Karagaon near Umerkote, Koraput district.

Powder made of "Triphala" and "Satavari" (L :*Asparagus racemosus.*) is mixed in milk and given for its cooling effect. Dose : 3g.

L : ***Thespesia populnea*** (Linn.) Soland. ex Corr. F: MALVACEAE

P : Kalinga near G . Udayagiri, Phulbani district. S : Parisha

Seed oil is applied externally in Leucoderma.

L : ***Thevetia peruviana*** (Pers.) K. Schum. F : APOCYNACEAE

V : Konyaari S : Pitakaravira

P : Phirangia near Phulbani, Phulbani district.

Ghee is applied on the leaf, warmed on a gentle fire and tied over the wounds for healing.

L : ***Tinospora cordifolia*** (Willd.) Miers ex Hook.f. et Th. F : MENISPERMACEAE

V : Goluchi (a & b); Gulchimala (c & d) S : Guduchi

P : Ramgiri near Metpad, Koraput district (a & b); Kutragada-Kusumgudi near Muniguda, Koraput district (c & d).

a) "Guduchi Satva" (White powder-like substance obtained from the stem) along with sugar is given in colds and Jaundice. Dose : 2-4g with sugar.

b) Decoction of stem of *Tinospora* together with some tubers of *Cyperus rotundus* (V : Mutha) and mericarps (fruit) of *Coriandrum sativum.* (V:Dhonia)is prepared and given in reeling sensation (Virtigo) in females due to vitiated "Pitha" .

c) Stem extract together with sugar candy is given in fevers due to vitiation of ``Pitha" and also to prevent Spermatorrhoea.

d) Stem is rubbed on a stone and the paste thus obtained is applied externally as an antidote for snake poison.

L : ***Toddlia asiatica*** (Linn.) Lamk. F : RUTACEAE

V : Konta Kasindri

P: Panimunda near Muniguda, Koraput district.

Root bark together with black peppers is ground well and the paste thus obtained is given in "Murcharoga" (Epilepsy).

Dose : 5 g of stem bark with 1 g of black peppers once a day for 3 days.

L : ***Toona ciliata*** M.J. Roem. F: MALIACEAE

(*Cedrela toona* Roxb.)

V : Mahalimb.

P : Ramgiri near Metpad, Koraput district.

Decoction made of equal quantities of stem barks of *Toona, Azadirachta indica* (V: Limb) and whole plant of *Andrographis paniculata* (V: Bhulimb) is given in fever particularly in case of female patients. Dose : 20 ml thrice a day.

L : ***Tragia involucrata*** Linn. F : EUPHORBIACEAE

V : Doolagondi S : Vrischikali

P : Chandrapur, off Muniguda, Koraput district .

Juice of *Citrus aurantifolia* (V: Nembu) and *Hibiscus rosa-sinensis* (V: Mandaar) are applied after rubbing the head with the fruit of *Tragia involucrata* in Alopecia. ("Indralupta").

Note: The bristles on the fruit cause burning sensation on contact with human body (*Hemadri* 3931).

L : ***Trianthema portulacastrum*** Linn. F : AIZOACEAE

V : Luduru saag S : Varsabhu

P : Rayagada, Koraput district.

Leaf is eaten as vegetable (*Hemadri* 3924).

L : ***Trichodesma indicum*** (Linn.) R.Br. F : BORAGINACEAE

V : Salpani S : Adhahpushpi

P : Balliguda, Phulbani district.

Leaves are applied as poultice in joint pain (*Sharma* 3030).

L : ***Tridax procumbens*** Linn. F : ASTERACEAE

V : Bisalyakarani (a & b) (Gondi dialect).

P : Kuduk village near Umerkote. Koraput district; Daringbadi, Phulbani district (b).

a) Juice of whole plant is applied to fresh cuts for healing.

b) Leaf juice is applied locally in cuts and wounds to check bleeding and promote healing (*Sharma* 2947).

L : ***Urena lobata*** Linn. F : MALVACEAE

V : Jongolo joto

P : Chitrakonda _ Balimela Project Road, Koraput district.

Fibre is extracted from stem bark.

L : ***Urgenia indica*** (Roxb.) Kunth F : LILIACEAE

V : Baago mundi pyaaz

P : Chitrakonda- Balimela Project Road, Koraput district.

a) Bulb of *Urginea* and tuberous root of *Ampelocissus tomentosa* are made into a paste and applied over the abscess on the throat ("Ganda maala") for healing.

b) Bulb is pounded and applied to the sprained limbs. (a & b) *Hemadri* 3839.

L : ***Vanda tessellata*** Hook. f.ex G.Don F : ORCHIDACEAE

V : Ilkum (a & b)(Koya dialect); Gatch ranga (c-e); Kavagadi (f). S : Rasna ?

P : Koyametla near Kalimela, Koraput district (a-b); Old Balimela village, Koraput district (c-e); Kutragada near Muniguda, Koraput district (f).

a) Juice of whole plant is given internally to hasten the healing of bone fracture.

Dose : 10 ml for 30 days.

b) Leaf juice is used as ear drops in acute Otitis media ("Karna srava"). Dose : 3 drops.

c) Leaf is made into a paste, applied externally and bandaged to set bone fractures (*Hemadri* 3844).

d) Fruit is ground into a paste and given internally to cattle to get rid of intestinal worms (*Hemadri* 3844).

e) The pleasant smell of *Vanda* flowers is inhaled to relieve one of headache. simultaneously, leaf juice is applied on fore-head (*Hemadri* 3844).

f) Whole plant is pounded well, warmed and applied to knee joints to relieve Rheumatic pains.

L : ***Vernonia cinerea*** (Linn.) Less. F : ASTERACEAE

V : Biranji

P : Phirangia near Phulbani, Phulbani district.

The root together with black peppers is made into a paste and given internally to cure Elephantiasis.

Dose : 7 roots & 7 Nos. of black peppers once a day for 21 days.

L : ***Vetiveria zizanioides*** (Linn.) Nash F : POACEAE

V: Vettiveru(Telugu) S : Ushira

P : Kalimela, Koraput district

5 g each of root of *Vetiveria* and *Hemidesmus indicus* (S :Sariba; V :Paalasana) are ground into a paste mixed in water and given in Diarrhoea..

L : ***Vitex negundo*** Linn. F : VERBENACEAE

V : Niligundi (a); Nirgundi (b); Begunia (c) S : Nirgundi

P : Gumma - Lakshmipur road near Rayagada, Koraput disrict (a); Sundi vilage near Phirangia, Phulbani district (b); Daringbadi, Phulbani district (c).

a) water boiled with leaf of *Vitex negundo* is used for bathing by women after delivery for about 21 days to relieve body pains.

b) A fresh internode is heated in the middle when a watery juice oozes out of both ends. The juice thus obtained is applied to forehead to relieve cold (Pratisyaya") (*Hemadri* 3951).

c) Leaves, pounded alongwith a little table salt, are administered internally in Constipation and Stomatitis (*Sharma* 2904).

L : ***Vitex peduncularis*** Wall. F : VERBENACEAE

V : Konchala (a&b) ; Chodaigudi (c&d)

P : Chitrakonda, Koraput district (a & b) ; Gurupoda, Phulbani district (c) ; Kalinga-G.Udayagiri, Phulbani district (d).

a) Juice of stem bark is given in stomach pain (*Hemadri* 3832). Dose : 10 ml.

b) Decoction of stem bark is given in Typhoid (Sannipata Jwara).

Dose : 5 ml thrice a day for three days (*Hemadri* 3832)

c) Water extract of stem bark is given in Black water fever. Dose : 10 g stem bark.

d) Decoction of dried leaf (10g) is given in Black water fever. Dose : 20 ml.

Fig. No. 38
Phoenix acaulis :
Apical bud is eaten to prevent
Puerperal diseases

Fig. No. 39
Bat : Flesh is roasted in ghee and
eaten to cure Tuberculosis
-- Bisni, a hamlet near Umerkote

L : ***Woodfordia fruticosa*** (Linn) Kurz F : LYTHRACEAE

V : Dhaatuki (a-c) S : Dhataki

P: Timanpur near Umerkote, Koraput district (a); Ramagiri -Gupteswar near Metpad Koraput district (b); Boudh, Phulbani district.(c).

a) Root of *Woodfordia* together with apical bud of *Phoenix acaulis* (V: Sindhi Kanda) is pounded, made into pills and given to control Leucorrhoea.

Dose : 5 g twice a day (*Hemadri* 3896).

b) Tender twigs of *Woodfordia*, one flower of *Hibiscus rosa-sinensis*, 10 g of tuber of *Nymphaea nouchali* are ground well into a paste, applied all over the body including head and then head bath is given after one hour to overcome menstrual disorders (Rajodosha).

c) Root is made into a paste and given internally to terminate pregnancy. Dose : 10 g.

L : ***Wrightia arborea*** (Dennst.) Mabberly F : APOCYNACEAE

[*Wrightia tomentosa* (Roxb.) Roem. et Schult]

V : Sitkudai (Bonda dialect)

P : Bonda hills near Govindpalli, Koraput district.

A strong fibre is extracted by the tribals from the inner stem bark.

L : ***Xylia xylocarpa*** (Roxb.) Taub. F : MIMOSACEAE

V : Tangini (Telugu) S : Kanakakuli

P : Old Balimela village, Koraput district.

Seeds are eaten as vegetable.

L : ***Zizyphus glaberrima*** (Sedgwick) Santapau F : RHAMNACEAE

V : Ghantolo

P : Gurupoda near Phulbani, Phulbani district.

Leaf of *Zizyphus* together with stem of *Tinospora cordifolia* (V: Guluchi), stem bark of *Azadirachta indica* (V : Limbo chaali), tubers of *Cyperus rotundus* (V: Motha) and "Triphala" is made into a decoction and given together with honey in fevers due to vitiated "Pitha" and with honey and `Pippali' in fever (Jwara) due to vitiated "Vata".

L : ***Zizyphus mauritiana*** Lamk. F : RHAMNACEAE

V : Regu (a) (Telugu); Barkoli (b). S : Badari

P : Manyamkonda near Kalimela, Koraput district ; Balliguda, Phulbani district (b).

a) Water extract of stem bark and some cloves of *Allium sativum* Linn. (S : Lasuna) is treated with a red hot knife and given in chest and abdominal pains. Dose : 5-10 ml.

b) Leaf, made into fine paste, is applied on forehead to relieve head-ache (*Sharma* 3048)

L : ***Zizyphus rugosa*** Lamk. F : RHAMNACEAE

V : Tinkoli

P : Balliguda, Phulbani district

Ripe fruits are eaten (*Sharma* 2889).

ii) ***Follk-loke claims of Mineral, Animal and Tantric Importance :***

V : **Rasa Sindhuram**

P : Jhorigaon near Umerkote, Koraput district.

Powder is blown into the ear in Otitis media (Karna sraava).

Ants

P : Burja village near Umerkote, Koraput district.

Red ants which nest in the leaves of Mango trees are made into chutney and eaten to reduce biliousness (Pith) .

Bat

V : Gadul

P : Bisni village near Umerkote, Koraput district.

The flesh of bat is roasted in ghee and eaten twice a day for 7 days as a cure for Tuberculosis.

Earth-worm

V : Kachia

P : Burja village near Umerkote, Koraput district.

One earthworm is roasted and given alongwith curry to nursing mothers for its lactative properties.

Kangudi bird

P : Ramgiri near Metpad, Koraput district.

Decoction of 1-2 dried pieces of flesh is given in Jaundice.

Milk of tiger

P : Chandrapur, off Muniguda, Koraput district.

Solidified milk of tiger (occasionally found in rocky forest areas) is made into a paste with a few drops of water and is given internally to increase secretion of mother's milk.

V : **Goyi** (Wild lizard). S : Godha

P : Phirangia near Phulbani, Phulbani district.

Oil is applied to the body to alleviate Rheumatic pains. The skin is used in making a musical instrument, locally known as "Khanjoni".

L : ***Abutilon indicum*** (Linn.) Sweet F : MALVACEAE

V : Bilai phul S : Atibala

P : Bonda hills near Govindapalli, Koraput district.

Root is offered, followed by a prayer when a tribal is possessed by "Devra" (God), particularly on "Somvaaree" (Monday) and "Guruvaaree" (Thursday).

L : ***Acacia leucophloea*** (Roxb.) Willd. F : MIMOSACEAE

V : Gohira S : Arimeda, Irimeda

Stem bark is made to inhale by the patients to ward off evil spirits.

L : ***Alangium salviifolium*** (Linn.f.) Wang. F : ALANGIACEAE

V : Ankul S : Ankola

P : Kalimela, Koraput districrt.

a) A piece of cloth soaked in oil extracted from "Ankola" seed is placed in contact with the eyes every night for 40 days to attain magical eye sight. The person so treated can `see through' even if the eye lids are tightly closed.

L : ***Canna indica*** Linn. F : CANNACEAE

V : Kat champa

P : Ramgiri near Metpad, Koraput district.

Fibre obtained from the rhizome is made to wear by children as talisman to ward off evil spirits.

L : ***Cassia tora*** Linn. F : CAESALPINIACEAE

V : Chakunda S : Prapunnada

P : Kalimela, Koraput district.

Leaf juice is claimed to be scorpion repellent. Hence, the locals apply the juice to the hands to catch scorpions.

L : ***Catunaregam spinosa*** (Thunb.)Tiruv. F : RUBIACEAE

(*Randia dumetorum* Lamk.) S : Madana

V : Gadya gatcho

P : Gurupriyo near Chitrakonda, Koraput district.

A twig is hung in a corner of the house to ward off evil spirits.

L : ***Dalbergia paniculata*** Roxb. F : FABACEAE

V : Dhobini, Satporlia

P : Old Balimela village, Koraput district.

Stem ash is used as " washing soda".

L : ***Datura metel*** Linn. F : SOLANACEAE

V : Kaalo duddura S : Dattura

P : Katrangia village on Phulbani - Gatchapoda road, Phulbani district.

Root pointing towards East is dug out after offering prayers, made into a talisman and tied around the upper arm with a belief that its very presence during intercourse prevents conception.

L : ***Hemidesmus indicus*** (Linn.) R.Br. ex Schult. F : PERIPLOCACEAE

V : Drishti voso (a); Ananthamoola, Sugandhi (b) S : Sariva (Sweta)

P : Chitrakonda, (Koraput district). Ramgiri - Gupteswar near Metpad, Koraput district.

a) Root is tied around the wrist of children with the help of a red thread to ward off eivl spirits.

b) The stem is made into a ring and tied to the wrist of children in case of fevers and

other ailments due to evil spirits.

Note : The ring is tied with the help of an old thread procured from " Dobhighat".

L : ***Mimosa pudica*** Linn. F :MIMOSACEAE

V : Laaj Kudi S : Lajjalu

P : Chitrakonda, Koraput district.

Water extract of root is given to children to ward off evil spirits. Dose : 10 ml.

L : ***Phyllanthus amarus*** Schum. et Thonn. F : EUPHORBIACEAE

V : Baadi aonla S : Bhudhatri, Tamalaki

P : Sundi village near Phulbani, Phulbani district.

On the Lunar eclipse day, prayers are offered and the root is dug out and kept with one self believing that the root acts as "Vasikarana" article and helps attracting the wanted person.

L : ***Solanum surattense*** Burm.f. F :SOLANACEAE

V : Dumma bhejiri S : Kantakari

P : Chitrakonda, Koraput district.

Root is tied as talisman around wrist to ward off evil spirits in children.

L : ***Vernonia cinerea*** (Linn.) Less. F : ASTERACEAE

V : Birinch S : Sahadevi

P : Phulbani, Phulbani district.

The plant is offered to Sun God on "Shyam Dashami" day.

L : ***Xanthium strumarium*** Linn. F : ASTERACEAE

V : Kandri gatcho S : Artagala ?

P : Gurupriyo near Chitrakonda, Koraput district.

Fruit or root is tied around the wrist of children to ward off evil spirits.

L : ***Zingiber roseum*** (Roxb.) Rosc. F : ZINGIBERACEAE

V : Mahani rasso

P : Ladda near Rayagada, Koraput district.

Dried chips of rhizome are tied around the upper arm or neck to ward off evil spirits.

ABBREVIATIONS

L : LATIN NAME ; F : FAMILY NAME ; V : VERNACULAR NAME;
S SANSKRIT NAME ; P : PLACE OF COLLECTION ; g : gram ml : milli litre

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CHAPTER - IV

TRADE PROSPECTS WITH PARTICULAR REFERENCE TO MEDICINAL PLANTS

The forests of Koraput and Phulbani districts, like those of Bastar of Madhya Pradesh are richly inhabited by midicinal plants and other plants of commercial importance. One would therefore, come across, a number of items of medicinal and food value sold by the tribals in the weekly bazaars. Some of such items include: flower & kernel of *Madhuca longifolia* Mac Bride var. *latifolia* (Roxb.) Chev. (S : Madhuka; V : Mohul phulo & Mohul tola or tora); gums of *Sterculia urens* Roxb. (S : Kateera; V : Katila lassa or Genduli lassa); *Anogeissus latifolia* (Roxb. ex DC.) Bedd. (S : Dhava; V: Dhavada lassa); seed of *Azadirachta indica* A. Juss. (S : Nimba; V : Nimb or Limbo beeja); Kernel of *Mangifera indica* Linn. (S : Amra; V : Kuyili tola, tora); rhizome of *Costus speciosus* (Koen. ex Retz.) Sm. (S : Kembuka; V : Kevukanda); leaf of *Bauhinia purpurea* Linn. (S: Vanaraja; V : Baroda) & *Marsilea minuta* Linn. (S : Sunishannaka, V : Chunia Saag); Milk-powder made from rhizomes of *Curcuma angustifolia* Roxb.(S : Tavakshira ?; V : Paal gundi); fruit of *Diospyros malabarica* (Desr.) Kostel. (V : Makad kendu) for dye extraction etc., in addition to various fruits, vegetables, pulses, oil seeds, tobacco, turmeric, maize etc.are cultivated in the back yards and other lands through "Jhola" (terrace) and "Podu" (shifting) cultivation. On enquiry it was found that all the raw drugs procured in various weekly shandies ultimately reach the whole - sale market at Dhamtari of Raipur district in Madhya Pradesh.

It is further observed that the number of items exploited by the tribals at present is very meagre. It is surprising, why procurement of such a common raw drugs as Triphala, Vidari, Bhunimba, Rasna etc., is being neglected in both Koraput & Pulbani districts. Most of the medicinal plants listed in Appendix can profitably be marketed,if a systematic procuremental procedure is chalked out, and handled preferably by the State Girijan Welfare Society or such other Corporations with the active involvement of the local tribals. It is also felt that Rayagada town with its rich Medicinal Flora all around, is the most suitable place for developing a "Centre for Procurement and Processing of Raw Drugs".

APPENDIX

Important Medicinal Plants found in Phulbani and Koraput Districts

Sanskrit Name	Latin Name
Gunja	***Abrus precatorius*** Linn.
Atibal	***Abutilon indicum*** (Linn.) Sweet
Khadira bheda	***Acacia chundra*** Willd.
Irimeda	***Acacia leucophloea*** (Roxb.) Willd.
Saptala	***Acacia sinuata*** (Lour.) Merr.
Harinmanjari	***Acalypha indica*** Linn.
Apamarga	***Achyranthes aspera*** Linn.
Hansapadi	***Adiantum lunulatum*** Burm.f.
Haridru	***Adina cordifolia*** (Roxb.) Hook .f. ex Brandis
Bilva	***Aegle marmelos*** (Linn.) Corr.
Pashanabheda ?	***Aerva lanata*** (Linn.) Juss.
Araluka	***Ailanthes excelsa*** Roxb.
Ankola	***Alangium salviifolium*** (Linn.f.) Wang.
Sugandha vacha ?	***Alpinia calcarata*** Rosc. (Cult.)
Saptaparna	***Alstonia scholaris*** R.Br.
Matsyakshi	***Alternanthera sessilis*** (Linn.) DC.
Tanduleeya	***Amaranthus spinosus*** Linn.
Kajutaka	***Anacardium occidentale*** Linn. (Cult.)
Bhunimba	***Andrographis paniculata*** (Burm.f.) Wall.exNees
Dhava	***Anogeissus latifolia*** (Roxb. ex DC.) Bedd.
Kadamba	***Anthocephalus chinensis*** (Lamk.) Rich. ex Walp.
Swarnakshiri	***Argemone mexicana*** Linn.
Vridda daaru	***Argyreia nervosa*** (Burm.f.) Boj.
Satavari	***Asparagus racemosus*** Willd.
Atavijambira	***Atalantia monophylla*** (Roxb.) DC.
Nimba	***Azadirachta indica*** A . Juss.
Danti	***Baliospermum montanum*** (Willd.) Muell.-Arg.
Vamsha	***Bambusa arundinacea*** (Retz.) Willd.
Kurantaka	***Barleria prionitis*** Linn.
Vanaraja	***Bauhinia purpurea*** Linn.
Kanchanara	***Bauhinia variegata*** Linn.
Kushmanda	***Benincasa hispida*** (Thunb.) Cogn. (Cult.)
Rasna ?	***Blepharispermum subsessile*** DC.
Rakta punarnava	***Boerhaavia diffusa*** Linn.
Salmali	***Bombax ceiba*** Linn.
Shallaki	***Boswellia serrata*** Roxb. ex Colebr.(glabrous variety)
Tala	***Borassus flabellifer*** Linn.
Priyala	***Buchanania lanzan*** Spreng.
Palasha	***Butea monosperma*** (Lamk.) Taub.
Adhaki	***Cajanus cajan*** (Linn.) Millsp. (Cult.)

Sanskrit Name	Latin Name
Swetarka	***Calotropis gigantea*** (Linn.) R.Br.
Vyaghranakhi ?	***Capparis zeylanica*** Linn.
Kumbhi	***Careya arborea*** Roxb.
Avartaki	***Cassia auriculata*** Linn.
Aragvadha	***Cassia fistula*** Linn.
Kasamarda	***Cassia occidentalis*** Linn.
Chakramarda	***Cassia tora*** Linn.
Madana	***Catunaregam spinosa*** (Thunb.) Tiruv.
Jyotishmati	***Celastrus paniculatus*** Willd.
Mandukaparni	***Centella asatica*** (Linn.) Urban
Musali (Sweta)	***Chlorophytum arundinaceum*** Baker
Chanaka	***Cicer arietinum*** Linn. (Cult.)
Twak	***Cinnamomum verum*** Presl. (Cult.)
Patha	***Cissampelos pareira*** Linn.
Asthisamhar	***Cissus quadrangularis*** Linn.
Korada (Vern.)	***Cleistanthus collinus*** (Roxb.) Benth. ex Hk.f.
Pitasuvarchala	***Cleome viscosa*** Linn.
Bharangi	***Clerodendrum serratum*** (Linn.) Moon
Bimba	***Coccinia grandis*** (Linn.)Voigt
Chilahinta	***Cocculus hirsutus*** (Linn.) Diels
Galagal, Vana Karpasa, Pita karpasa	***Cochlospermum religiosum*** (Linn.) Alston
Tripakshee	***Coldenia procumbens*** Linn.
Shleshmataka	***Cordia dichotoma*** Forst.f.
Kembuka	***Costus speciosus*** (Koen. ex Retz.)Sm.
Sariva (Krishna)	***Cryptolepis buchanani*** Roem. et Schult.
Bhumitala, Talamuli	***Curculigo orchioides*** Gaertn.
Tavakshira?	***Curcuma angustifolia*** Roxb.
Haridra	***Curcuma longa*** Linn. (Cult.)
Amaravalli	***Cuscuta reflexa*** Roxb.
Varaguna?/Vidari?	***Cycas circinalis*** Linn.
Durva	***Cynodon dactylon*** (Linn.) Pers.
Musta	***Cyperus rotundus*** Linn.
Dhatura	***Datura metel*** Linn.
Shalaparni?	***Desmodium gangeticum*** (Linn.) DC.
Virataru	***Dichrostachys cinerea*** (Linn.)Wt.et Arn.
Tinduki	***Diospyros exsculpta*** Buch.-Ham. (***Diospyros melanoxylon*** Roxb.)
Bahupatra, Lingini	***Diplocyclos palmatus*** (Linn.) Jaffery
Kulatha	***Dolichos biflorus*** Linn. (Cult.)
Bhringaraja	***Eclipta alba*** (Linn.) Hassk.
Ela	***Elettaria cardamomum*** (Linn.) Maton (Cult.)

Sanskrit Name	Latin Name
Makara	***Eleusine coracana*** Gaertn. (Cult.)
Vidanga ?	***Embelia villosa*** Wall.
Paribhadra	***Erythrina indica*** Lamk.
Dugdhika	***Euphorbia hirta*** Linn.
Patra snuhi	***Euphorbia neriifolia*** Linn.
Patra snuhi	***Euphorbia nivulia*** Buch.- Ham.
Vishnukranta	***Evolvulus alsinoides*** (Linn.) Linn.
Vata	***Ficus benghalensis*** Linn.
Udumbara	***Ficus racemosa*** Linn.
Aswatha	***Ficus religiosa*** Linn.
Dikamali, Nadi hingu	***Gardenia gummifera*** Linn.f.
Bharangi ?	***Gardenia latifolia*** Ait.
Langali	***Gloriosa superba*** Linn.
Kasmaree	***Gmelina arborea*** Roxb.
Mesha shringi	***Gymnema sylvestre*** (Retz.) R.Br. ex. Schult.
Avartani	***Helicteres isora*** Linn.
Hastisundi	***Heliotropium indicum*** Linn.
Sariva (Sweta)	***Hemidesmus indicus*** (Linn.) R.Br. ex. Schult.
Madhavi	***Hiptage benghalensis*** (Linn.) Kurz
Kutaja	***Holarrhena antidysenterica*** Wall.ex A.DC.
Chirabilva	***Holoptelea integrifolia*** (Roxb.) Planch.
Ratna purusha	***Hybanthus suffruticosus*** (Linn.) Baill.ex Lanessy
Kokilaksha	***Hygrophila auriculata*** (Schumach.) Heine
Sariva (Krishna)	***Ichnocarpus frutescens*** (Linn.) R. Br.
Darbha	***Imperata cylindrica*** (Linn.) P. Beauv.
Nilika	***Indigofera tinctoria*** Linn.
Kshira vidari	***Ipomoea mauritiana*** Jacq.
Dravanti?	***Jatropha curcas*** Linn.
Vaasa	***Justicia adhatoda*** Linn.
Alabu	***Lagenaria leucantha*** (Duch.) Rusby (Cult.)
Jingini	***Lannea coromandelica*** (Houtt.) Merr.
Granthiparni	***Leonotis nepetifolia*** (Linn.) Ait.f.
Kapitha	***Limonia acidissima*** Linn.
Atasi	***Linum usitatissimum*** Linn. (Cult.)
Medasaka	***Litsea glutinosa*** (Lour.) Robinson
Madhuka	***Madhuca longifolia*** (Koen.) Mac Bride var. ***latifolia*** (Roxb.) Chev.
Kampilla	***Mallotus philippensis*** (Lamk.) Muell.-Arg.
Amra	***Mangifera indica*** Linn.
Rajadana?	***Manilkara hexandra*** (Roxb.) Dub.
Sunishannaka	***Marsilea minuta*** Linn.
Kakanasa?	***Martynia annua*** Linn.
Campaka	***Michelia champaca*** Linn.
Lajjalu	***Mimosa pudica*** Linn.
Karavellika	***Momordica charantia*** Linn.
Akshikaphala?	***Morinda tomentosa*** Heyne ex Roth

Sanskrit Name	Latin Name
Shigru	***Moringa oleifera*** Lamk.
Kapikachhu, Atmagupta	***Mucuna pruriens*** (Linn.) DC.
Surabhinimba	***Murraya koenigii*** (Linn.) Spreng.
Kadali	***Musa paradisiaca*** Linn.
Kamala	***Nelumbo nucifera*** Gaertn.
Karavira	***Nerium indicum*** Mill. (Planted)
Parijata	***Nyctanthes arbortristis*** Linn.
Ajaka	***Ocimum americanum*** Linn.
Tulasi	***Ocimum sanctum*** Linn. (Planted)
Syonaka	***Oroxylum indicum*** (Linn.) Vent.
Sali	***Oryza sativa*** Linn.
Tinisha	***Ougeinia oojeinensis*** (Roxb.) Hochr.
Changeri	***Oxalis corniculata*** Linn.
Prasarani	***Paederia foetida*** Linn.
Ketaki	***Pandanus fascicularis*** Lamk. (*Pandanus tectorius* Soland. ex Parkinson)
Uthamarani	***Pergularia daemia*** (Forsk.) Chiov.
Bhudhatree	***Phyllanthus amarus*** Schum. et Thonn.
Amalaki	***Phyllanthus emblica*** Linn.
Krishna kambhoji	***Phyllanthus reticulatus*** Poir.
Pippali	***Piper longum*** Linn.
Marica	***Piper nigrum*** Linn. (Cult.)
Variparni? Jalakumbhi	***Pistia stratiotes*** Linn.
Chitraka (Rakta)	***Plumbago rosea*** Linn.
Chitraka (Sweta)	***Plumbago zeylanica*** Linn.
Karanja	***Pongamia pinnata*** (Linn.) Pierre [*Derris indica* (Lamk.) Bennett]
Agnimantha	***Premna latifolia*** Roxb.
Bijasara, Asana	***Pterocarpus marsupium*** Roxb.
Vidari	***Pueraria tuberosa*** (Roxb. ex Willd.) DC.
Dadima	***Punica granatum*** Linn. (Cult.)
Bharangi	***Pygmaeopremna herbacea*** (Roxb.) Moldenke
Sarpagandha	***Rauvolfia serpentina*** (Linn.) Benth. ex Kurz
Sarpagandha bheda	***Rauvolfia tetraphylla*** Linn.
Yuthiparni	***Rhinacanthus nasuta*** (Linn.) Kurz
Eranda	***Ricinus communis*** Linn. (Cult.)
Manjishta	***Rubia cordifolia*** Linn.
Ikshu	***Saccharum officinarum*** Linn. (Cult.)
Candana	***Santalum album*** Linn.
Kosamra	***Schleichera oleosa*** (Lour.) Oken
Mokshaka	***Schrebera swietenioides*** Roxb.
Gajapippali	***Scindapsus officinalis*** Schott
Bonogajari (Vern.)	***Scoparia dulcis*** Linn
Bhallataka	***Semecarpus anacardium*** Linn.f.
Sala	***Shorea robusta*** Gaertn.f.

Sanskrit Name	Latin Name
Bala bheda	***Sida acuta*** Burm.f.
Bala	***Sida cordifolia*** Linn.
Mahabala	***Sida rhombifolia*** Linn.
Lakshmana?	***Smithia conferta*** Sm.
Brihati	***Solanum indicum*** Linn.
Vrintaka	***Solanum melongena*** Linn.
Kakamachi	***Solanum nigrum*** Linn.
Kantakari	***Solanum surattense*** Burm.f.
Mamsarohini	***Soymida febrifuga*** A . Juss.
Munditaka	***Sphaeranthus indicus*** Linn.
Amrataka	***Spondias pinnata*** (Linn.f.) Kurz
Kateera	***Sterculia urens*** Roxb.
Patala	***Stereospermum suaveolens*** (Roxb.) DC. [*S. chelonoides* (Linn.f.) DC.]
Sakhota	***Streblus asper*** Lour.
Vishamushti	***Strychnos nuxvomica*** Linn.
Kataka	***Strychnos potatorum*** Linn.f.
Jambu	***Syzygium cumini*** (Linn.) Skeels
Amlika	***Tamarindus indica*** Linn.
Saka	***Tectona grandis*** Linn.f.
Sharapunkha	***Tephrosia purpurea*** (Linn.) Pers.
Arjuna	***Terminalia arjuna*** (Roxb.ex DC.) Wt. et Arn.
Vibhitaka	***Terminalia bellirica*** (Breyn ex Gaertn.) Roxb.
Haritaki	***Terminalia chebula*** Retz.
Peetakaravira	***Thevetia peruviana*** (Pers.) K.Schum.
Guduchi	***Tinospora cordifolia*** (Willd.) Miers ex Hook.f.et Th.
Vrischikali	***Tragia involucrata*** Linn.
Varsabu	***Trianthema portulacastrum*** Linn.
Gokshura	***Tribulus terrestris*** Linn.
Visalya karani ?	***Tridax procumbens*** Linn.
Jhinjhirita	***Triumfetta rhomboidea*** Jacq.
Ajadvishta	***Tylophora indica*** (Burm.f.) Merr.
Prisniparni	***Uraria picta*** Desv.
Vana palandu	***Urgenia indica*** (Roxb.) Kunth
Rasna?	***Vanda tessellata*** Hook.f. ex G . Don
Sahadevi	***Vernonia cinerea*** (Linn.) Less.
Ushira	***Vetiveria zizanioides*** (Linn.)Nash
Nirgundi	***Vitex negundo*** Linn.
Chodaigudi (Vern.)	***Vitex peduncularis*** Wall.
Dhataki	***Woodfordia fruticosa*** (Linn.) Kurz
Asita kutija	***Wrightia tinctoria*** R.Br.
Kanakakuli	***Xylia xylocarpa*** (Roxb.) Taub.
Tumburu, Tejovati	***Zanthoxylum armatum*** DC
Ardraka	***Zingiber officinale*** Rosc. (Cult.)
Badari	***Zizyphus mauritiana*** Lamk.
Valli badari	***Zizyphus oenoplia*** (Linn.) Mill.

[Cult.= Cultivated; Vern. = Vernacular name]

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SEP